



Beacon

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A series of key messages
from works by academics
useful for tackling
industrial animal agriculture
in developing countries

A project of Burning Questions Initiative

Issue 2 | April 2024

Eight studies are featured. They cover:

1. Global poultry genetics companies' power in Africa.
2. Diets in LMICs shaped by complex food environment.
3. Tradeoffs required to make livestock systems climate-friendly.
4. Asian industrial broiler production's wide range of problems.
5. EU food strategies can improve LMICs' animal welfare.
6. Tactics to sell industrial chicken products in Guatemala.
7. Egypt's poultry industry harbors avian flu and gets subsidies.
8. Problematic claims made by dairy companies in China.

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1

Goga, Samayya, and Simon Roberts. **“Multinationals and competition in poultry value chains in South Africa, Zambia, and Malawi.”** 2023/11, Centre for Competition, Regulation and Economic Development (CCRED), University of Johannesburg, Aug. 2023. [link](#).

Lack of competition in global poultry genetics gives multinational companies outsize power in Africa, harming small-scale producers.

Two companies – Tyson (U.S.) and EW Group (Europe) – who now control almost the entire, global poultry genetics market, have entered into various arrangements with a small set of national or regional poultry firms in South Africa, Zambia, and Malawi. And there is evidence of collusion, cartels, and anticompetitive behavior.

- The global poultry genetics industry is extraordinarily concentrated, with just two companies – Tyson and EW Group – controlling the most widely-used meat breeds.
- With their entry into the sub-Saharan Africa market, major questions are raised regarding the power they and their African business allies exert. These include:
 - The adequacy of the *merger review process*: Mergers and acquisitions in poultry genetics have been scrutinized in various countries and regions. Nonetheless, the supply of day-old chicks in sub-Saharan Africa is now controlled by just a handful of companies, and *smaller producers find that they are effectively excluded*.
 - Prevention of *collusion and cartels*: Conditions in the African poultry genetics sector are highly conducive to collusion, and companies have already been found guilty of anticompetitive behavior in southern Africa. Tyson has admitted to price-fixing in the US, so this type of behavior does not seem rare.
 - *Food prices*: The dominant companies have restricted the supply and increased the price of day-old chicks. This has made chicken meat more expensive for the public.
 - Use of *soy and maize for animal feed*: Some of these companies are also involved in feed production, meaning that the African poultry industry is increasingly intertwined with the *global* soy and maize trade.
- To address these questions and concerns, one needs to *scrutinize corporate structures and competition nationally and globally*.



Why is this academic study particularly useful for addressing “burning questions”?

- This study is relevant to AGB2: “What efforts or interventions are both effective and regionally/culturally appropriate to bring greater scrutiny to slow or stop the exportation of industrial animal farming practices to LMICs?”

- Poultry breeds are intellectual property, so companies that own their genetics can make money by controlling access. This motivates them to acquire or merge with other genetics companies and to expand into new markets (such as LMICs). This is an important channel and strategy by which the Global North exports industrial farming practices to and shapes the development of industrial animal farming in the Global South such as South Africa, Zambia, Malawi.
- There may be ways to disrupt the flow of this kind of export and bring greater scrutiny to this strategy. But these will *require specialized agribusiness knowledge*, including the expertise to examine a “network of holding companies and joint ventures” and the details of the merger review process.

Deeper Dive

1. Concentration and consolidation of agri-food corporations is a grave concern

- The global agri-food sector is highly concentrated: Companies at the same stage of the value chain have grown and merged until just a handful of companies control much of the market. Companies have also integrated vertically, expanding their operations to cover multiple stages in the value chain.
- *This concentration and consolidation raises many concerns*: It means that farmers have fewer sellers that supply them with materials and inputs to choose from, and fewer buyers for their products. In a concentrated market it is easier for companies to collude to lower wages and increase consumer prices. Dominant companies lobby for favorable policies, and many experts argue that power over the global food system increasingly lies in the hands of transnational agribusiness giants.

2. Concentration in the poultry genetics industry is especially pronounced

- Just two companies, Tyson (USA) and EW Group (Europe), control all the main commercial broiler breeds. Two breeds, the Cobb (Tyson) and Ross (EW Group), account for roughly 90% of commercial broiler production in most countries.
- Concentration in poultry genetics is an important issue: Day-old chicks from “improved” breeds are an essential input into chicken meat production. These birds are *highly efficient at converting feed into meat* in controlled conditions. *Feed is a major expense in poultry production*, so efficient feed conversion is necessary for poultry producers to make a profit.

3. Power of Tyson and EW Group and their partners in Africa in controlling access to poultry chicks

- Tyson and EW Group have developed *joint ventures and licensing deals* with poultry companies in Africa, and are *part-owners* of some of them. These companies can produce chicks of Tyson and EW Group’s breeds to be raised in-house or by contract growers, or sold. In South Africa, Zambia, and Malawi, these companies have large market shares and may also be vertically integrated. Poultry production is therefore concentrated at the national level as well as the global level.
- These companies have engaged in practices such as *colluding to restrict the supply and increase prices of day-old chicks*. As some of them not only breed and sell chicks but also raise them for meat, they have become *both suppliers and competitors* to other producers.
- How did this situation arise?: One key factor is that *company mergers and acquisitions* are approved or denied by national or regional committees based on their likely effects in that location. However, they can have consequences worldwide.
- For example, Aviagen (part of EW Group) was permitted to acquire Hubbard in 2018, based on a finding that this would not impact competition in the UK’s poultry market. However, Hubbard’s slower-growing, “free range” breed might have been attractive to smaller African producers and a strong competitor to Tyson and EW Group’s offerings.

4. What are the impacts?

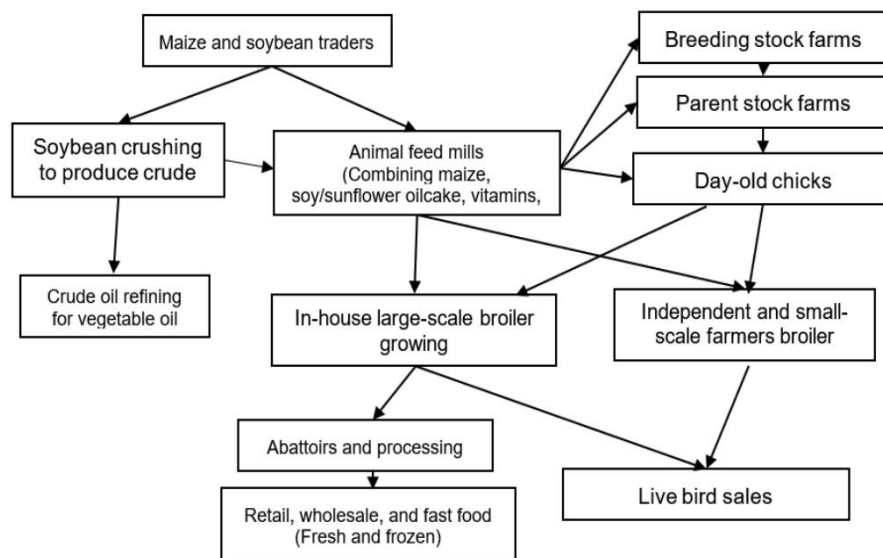
- Small and independent poultry producers have reported many problems arising from being dependent on a handful of large companies for crucial inputs. These include long waiting times and high prices for day-old chicks (or being excluded from purchasing them altogether), being required to buy feed as well as chicks, and suppliers increasing prices that had already been agreed on.
- Consumers also pay more for chicken than they otherwise would.
- Concentrating power within a handful of companies likely also stifles innovation, reduces resilience, and reinforces dependency on global supply chains.

5. Why does it matter that small-scale and independent producers are disadvantaged and pushed out by large companies?

- Smallholder or independent broiler production is not guaranteed to be high-welfare or environmentally-friendly, so why should animal and environmental advocates care about commercial poultry genetics and that small-scale producers in Malawi, South Africa, and Zambia find it very difficult to compete with large companies allied with multinationals such as Tyson and EW Group?
- For one, in addition to deserving to have their interests taken into account, the many small-scale producers in LMICs stand in the way of a fully industrialized animal agriculture system which likely brings even worse outcomes. Besides, if these people give up on farming and move to cities, they may become additional consumers of industrial animal products.
- Moreover, a food system that relies on narrow genetics and a single production method is a fragile and vulnerable system that threatens everyone.

6. What can be done?

- A practical step is to have competent researchers examine and bring into the open various countries' competition laws, mergers and acquisitions, cross-shareholdings, joint venture arrangements, licensing/distribution agreements, information exchange and coordination among firms, and other activities and documents related to corporate structures and competition nationally and globally.



The poultry value chain in South Africa, Zambia, and Malawi. When a company is vertically integrated, it performs more than one step in the value chain. Independent and small-scale farmers report difficulties in obtaining day-old chicks from the large companies that control much of the supply in these countries. From Goga & Simons (2023).

2

Gupta, Neha, et al. "Food environment framework in low- and middle-income countries – An integrative review." *Global Food Security* 39 (2023): 100716. [link](#).

Eating behaviors in LMICs are influenced by many factors in addition to what is affordable, convenient, and tastes good.

Why do people eat what they eat? Individual food choices are shaped by a complex mix of factors, from government policy to people's confidence in their own cooking skills. Those wishing to promote plant-centric diets in LMICs should engage with as many facets of the "food environment" in these countries as possible, and take note that these differ significantly from those in high-income countries.

- The food environment concept describes the *diverse attributes of the natural, built, and social environments* that influence people's food consumption.
- This study characterizes the food environment in LMICs in terms of four levels: *Policy, Neighborhood, Household, and Individual*.
- For each level, it identifies the varied mix of factors that influence what people eat. To give just a few examples, this includes import/export policies (Policy), presence of school food kiosks (Neighborhood), distance from home to markets (Household), and food-related beliefs (Individual).
- The influence of the food environment implies that those wishing to promote plant-centric diets must look at factors *in addition to individuals' needs and preferences*.
- For example, it may well be possible to create plant-based foods that are easy to prepare, taste good in trials, and are affordable to a typical consumer in a particular location. However, to obtain widespread adoption, advocates will need to consider how the product fits in with other facets of the food environment (and vice versa) faced by most consumers in that location, especially as *these facets vary widely in different LMICs and are unlike those in high-income countries*.



Why is this academic study particularly useful for addressing "burning questions"?

- This study is relevant to CON-1: "What plant-centric diets are nutritionally, culturally, and regionally appropriate for different LMICs? What are the most effective ways to promote those diets to different stakeholders?"
- It shows that promoting plant-centric diets will require understanding the needs and behaviors of many different stakeholders in addition to the end consumer.
- This will apply even to diets that are nutritionally- and culturally-appropriate.
- The study can point advocates towards specific stakeholders and food environment components that may be important to understand in the process of developing strategies for promoting certain foods or diets.

Deeper Dive

1. What is the food environment concept and framework?

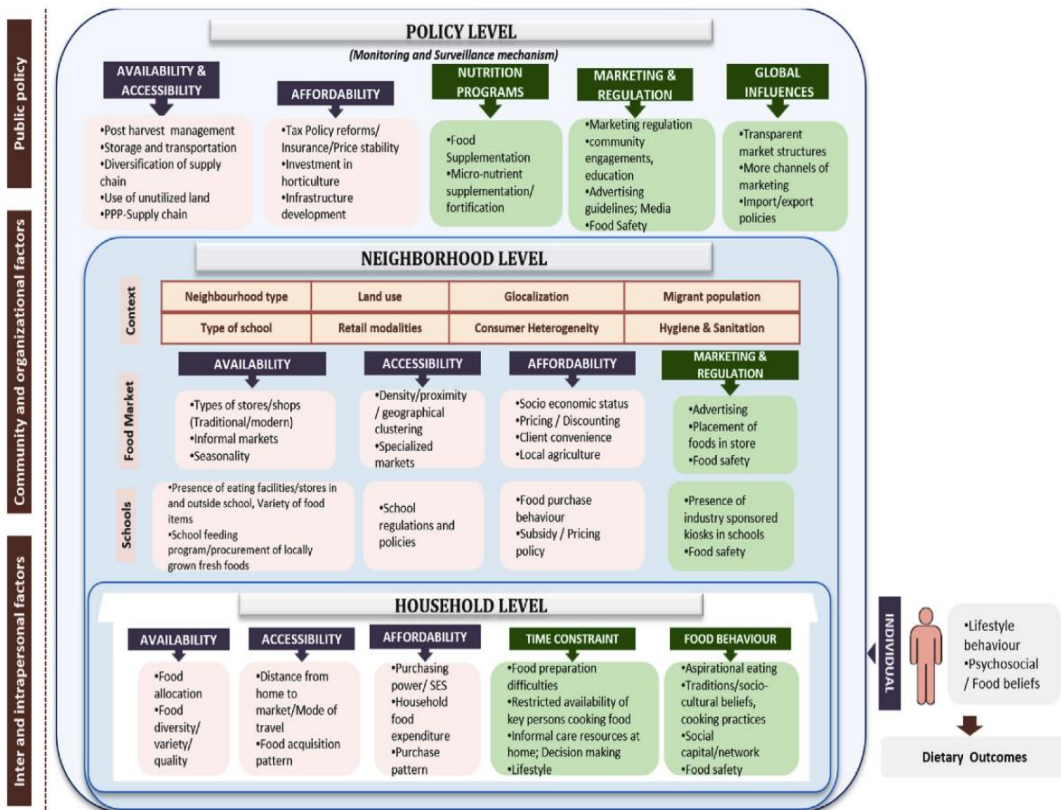
- The food environment concept provides a way of understanding and visualizing the many factors that affect what people eat. Using a “framework” like this is a very helpful way of organizing one’s thinking about a complex subject and about how to create change.
- Until this study, though, a detailed food environment framework for LMICs had not been developed.
- To characterize the food environment in LMICs, the authors reviewed 28 studies conducted in LMICs that investigated links between potential food environment attributes and dietary outcomes (such as consumption of fruits and vegetables).

2. Which food environment features are familiar and which are unexpected?

- Advocates may not be surprised to learn that government policy appeared to affect what people eat. However, this study does illuminate the wide range of policy areas that are relevant, from tax laws to advertising guidelines.
- Some familiar household factors like purchasing power and time constraints were also identified, along with less tangible attributes such as people’s aspirations and traditions.
- Perhaps more unexpectedly, many factors at the neighborhood level were also found to influence people’s eating behavior. The overall characteristics of the neighborhood (economic disparities, transportation, types of retail outlet, sanitation, and so on) were relevant. Within a neighborhood, characteristics of schools and food markets also had an effect. Other sites such as workplaces might also be important but very little data existed in those areas.

3. Food environment in LMICs are complex, varied, and different from high-income countries (HICs)

- *Overall, LMIC food environments are quite different from those in HICs. As well as being dynamic and varied relative to HICs (because of rapid changes in societies, economies, and food sources), food environments in LMICs contain items such as informal markets, hawkers, and food carts that further distinguish them from HICs.*
- The food environment diagrams presented by the authors contain many items and it may not be immediately obvious to advocates how they can be used. However, *the complexity is part of the point: food systems, and changing them, are not simple.* We recommend that advocates use the diagrams as a starting point to help them think about what parts of the food environment they will need to understand more deeply for their specific purposes.
- This will not be the last word on food environments in LMICs. The authors were only able to find 28 relevant studies across all LMICs (10x fewer than in HICs), data quality varied, and the framework might need to be tailored to individual LMICs.



Factors at four levels - policy, neighborhood, household, and individual - influence what people eat. This diagram is rather complicated as it reflects the complexity of the real world. However, advocates can use this and the other diagrams in the paper to help them think through which elements of the food environment may be relevant in their attempts to shift diets in LMICs. From Gupta et al. (2023)

3

Bonilla-Cedrez, et al. **“Priority areas for investment in more sustainable and climate-resilient livestock systems.”** *Nature Sustainability* 6, no. 10 (June 29, 2023): 1279–1286. [link](#).

Livestock systems can be made more climate-friendly and resilient. Doing so will require difficult choices and a deep understanding of specific contexts.

Livestock production supplies benefits to many people in LMICs, but it also contributes to, and is vulnerable to, climate change. Techniques for both reducing emissions and adapting to climate change exist. However, selecting and implementing them requires making tradeoffs between adaptation, mitigation, and non-climate considerations, and recognizing context-specific barriers to adoption.

- This study of 132 LMICs identifies countries where reducing livestock-related emissions is a high priority, according to each country’s total greenhouse gas emissions from livestock production.
- It also identifies countries in which adaptation is a high priority, based on the amount of livestock production exposed to various hazards. In LMICs, the most prevalent climate-related threats are heat stress, drought, and variable rainfall.
- To reduce emissions and adapt to the changing climate, governments, investors, and farmers have a variety of options (restoring degraded rangelands, using higher-quality feed and forage, providing better weather information, etc.).
- Barriers to adoption of emission reduction and adaptation methods include cost, knowledge, labor, and land tenure issues. *The importance of these barriers varies widely between different locations and contexts.*
- Tradeoffs and difficult choices exist at various levels. For investors, if mitigation and adaptation are equally important, India, Brazil, China, Pakistan and Sudan should be prioritized. *Prioritizing either mitigation or adaptation would lead to selecting different sets of countries.*
- At the farm level, tensions exist between, for example, the emissions reductions achieved by reducing herd sizes, and the social and economic benefits farmers obtain from keeping a larger number of animals.

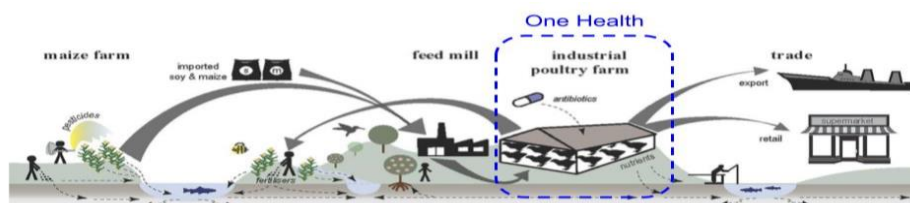
4

Mahanty, Sango, et al. "A policy and research agenda for Asia's poultry industry." *Asia & the Pacific Policy Studies*, June 29, 2023, app5.377 [link](#).

To address the full range of problems caused by industrial poultry production in Asia, one needs to look beyond the gates of factory farms.

Broiler production in Asia involves a complex web of industries and actors. Negative impacts arise well beyond the gates of the factory farms themselves, and some of them are very poorly understood. This study proposes the concept of the Asian "broiler complex" to capture the full range of problems and possible solutions, moving beyond relatively narrow approaches like One Health.

- Encouraged by governments, industrial poultry production in Asia is expanding fast.
- This production system is composed of a *complex mesh of materials, processes, and relationships*. This includes the value chain itself (from agricultural inputs to outlets where meat is sold); the land, labor, and trade networks that sustain it; and the agricultural and veterinary chemicals that flow from it. The authors call this intertwined network the *Asian "broiler complex"*.
- The broiler complex gives rise to a host of negative effects on humans, animals, and ecosystems. Some potential problems, such as the effects of certain agrochemicals on humans, are not yet well understood.
- Many governments are using the One Health framework, which recognizes connections between human, animal, and environmental health, to manage some of these impacts. One Health approaches have prioritized disease management and antimicrobial resistance over issues such as animal welfare, ecological health, and the potential effects of pollutants on humans. *One Health has centered industry interests and emphasized technological solutions for factory farms, rather than critically examining the broiler complex as a whole.*
- To effectively address the impacts of industrial poultry production, stakeholders will need to understand *how problems accumulate along the value chain and are amplified by the scale and demands of the industrial system.*
- Even advocates who are mainly concerned with a single point in the chain would benefit from at least a surface-level understanding of the *whole* Asian broiler complex.



The Asian "broiler complex". The authors of this article argue that One Health approaches to minimizing the harms of industrial poultry production in Asia have focused narrowly on disease management on factory farms. Instead, they should examine the entire broiler complex. Adapted from Mahanty, et al. (2023).

5

Molitorisová, Alexandra, and Ciarán Burke. **“Farm to Fork Strategy: Animal welfare, EU trade policy, and public participation.”** *Applied Economic Perspectives and Policy* 45, no. 2 (2023): 881–910. [link](#).

Public participation, including that of stakeholders from LMICs, is key to taking full advantage of new EU 2020 food strategies to improve farm animal welfare worldwide.

Food-related trade agreements between the EU and third countries can be used to improve animal welfare. A range of tools for cooperation is available, and there are opportunities to use them more effectively. Avenues for public participation need to be improved, and those concerned with animal welfare in LMICs should take part in the process.

- The EU’s Farm to Fork Strategy – launched in May 2020 – is a roadmap towards a sustainable EU food system. It explicitly includes animal welfare.
- As sustainability is a global challenge, the Strategy involves trade agreements with "third countries" outside the EU.
- This study identifies a range of tools for improving animal welfare via these trade agreements: These include providing technical assistance for implementing EU standards, developing joint research programs, requiring inspections and audits, and aligning a third country’s legislation with EU laws.
- The study also points out that animal welfare can be included in agreements dealing with issues like environmental protection, agricultural and rural development, and antimicrobial use.
- Several agreements have already focused on, or incorporated, animal welfare. Examples include creating guidelines for stunning and slaughter (EU-Korea), and conducting research into science-based welfare standards (EU-Indonesia).
- Some existing agreements use relatively basic tools for cooperating on animal welfare, such as exchanging information and achieving a mutual understanding of issues. *More advanced tools, such as joint research programs and aligning legislation, should be more widely used.*
- *Public participation in the policy process should be encouraged*, partly because public demand can help to justify including ethical issues in trade agreements. Eurogroup for Animals regularly comments, but other organizations could also make meaningful contributions.
- The process for participation needs to be improved in several ways. If animal welfare is to be genuinely improved, *understanding the needs and concerns of stakeholders in third countries, especially LMICs, is key.*

6

Chuvileva, Yulia, et al. "Selling industrial 'gallina criolla' products in Guatemala: Implications for consumers, producers, heritage, and biodiversity." Tiny Beam Fund, December 29, 2022. [link](#).

Food corporations market industrial chicken products in Guatemala as coming from peasant and indigenous chickens (gallina criolla) favored by local consumers.

Guatemalans are consuming more broilers from industrial farms instead of gallina criolla. The change has not been random. Food and poultry industries have stimulated both supply and demand through political and commercial activities. One tactic is to sell industrial chicken products using words and images associated with indigenous and peasant peoples.

- The term "gallina criolla" refers to chickens that are the heritage of the peasants and indigenous peoples of Guatemala, often raised with agroecological practices. They are quite distinct from industrial chickens that come from the other end of chicken production in Guatemala.
- Food and poultry industries' main competitor in Guatemala has always been and continues to be gallina criolla. As a result, global and local companies have begun offering their own industrial product lines of "gallina criolla" fresh chicken, consommés, and instant soups. The report sheds light on how these corporate marketing tactics are used to compete with genuine gallina criolla.
- By claiming to be "gallina criolla", the commercial products may *misleadingly convince consumers to eat unlike industrial substitutes*.
- The case of industrial "gallina criolla" products in Guatemala is one example of *how global food businesses expand into local markets around the world*. It also highlights the problematic use of certain words and images in food marketing.
- People in various countries have resisted corporate appropriation of existing agrarian and cultural symbols. Possible actions that could be taken in Guatemala include the brands voluntarily revising their marketing practices, consumers boycotting the products, or legal defenders challenging the companies in courts using the country's misleading advertising laws.

"In August 2018, the Malher brand, which belongs to Nestlé, . . . announced that "a taste of the countryside" was coming to Guatemala. It advertised its "gallina criolla" consommé (Figure 9) with images of birds in the wild, fed by a woman, against the backdrop of Guatemala's volcanoes and hillsides."
From Chuvileva, et al. (2022).



Figure 9: Malher's "Gallina Criolla Consomme"¹¹⁴

7

Dixon, Marion W. **“Eek! What the chick: Addressing the issues of industrial poultry in Egypt.”** Tiny Beam Fund, January 6, 2023. [English link](#). [Arabic link](#).

Egypt's poultry industry plays important role in the country's avian flu outbreaks and benefits from government food subsidy system.

Major features in Egypt's broiler chickens industry: 1. Avian flu virus is endemic, killing millions of chickens each year. 2. Large corporations contract out disease risks by using smaller-scale producers to raise chicks to adulthood. 3. Reliance on imported corn for animal feed which is subsidized by the government.

- Large corporations dominate Egypt's broiler production:
 - They control grandparent and parent breeding.
 - They contract out avian flu risks and responsibilities to small- and medium-scale operators in the value chain. Even though industrial facilities are the vector of the virus, they remain relatively unharmed.
 - They enjoy a particular government food subsidy for imported corn.
- Government food subsidies and imported foods face backlash. But a nuanced understanding is needed. They should not be blamed for the fiscal burden on the state and be cut out entirely. For example:
 - Bread subsidy has proven to alleviate rural food insecurity.
 - "Increasing the fava bean subsidy while decreasing the animal protein subsidy is a necessary step to increasing domestic production of fava beans."
- Recommended actions:
 - Introduce policies to weaken corporate poultry industry and its business model of dumping risks and costs onto smaller operators. Put in place government regulations to restrict large-scale, biosecure facilities from selling chickens and passing on infected chickens (and the virus) to these operators.
 - Address the issue of food subsidies: The system should subsidize native plant-based foods and end subsidies that favor the poultry industry and red meat producers/importers.

8

Howard, Philip H. **“The politics of milk: Examining claims about dairy in China.”** Tiny Beam Fund, November 30, 2022. [link](#).

Huge growth in dairy production and consumption in China owes a lot to powerful but problematic claims from dairy industry.

Effective, powerful, (but problematic) claims promoting dairy products are frequently made by dairy industry executives, investors, government officials, and even civil society organizations. They are widely repeated in mainstream media. These claims are: Dairy is cheap. Dairy is nutritious. Rising consumer incomes are increasing demand for dairy.

- *Cheap.* Why is this problematic: No mention of dairy's hidden costs (government subsidies, negative social and ecological impacts) which are not included in retail prices.
- *Nutritious.* Why is this problematic: Leaves out negative health impacts of vastly elevated consumption of industrialized dairy products particularly in ultra-processed form (e.g., ice cream), and the fact that deficiency of protein is relatively uncommon in China today.
- *Rising consumer demand.* Why is this problematic: Glosses over substantial role of potent marketing efforts to shape consumers' purchasing behaviors and demands.
- *These claims should be challenged* because:
 1. They “change the subject”, obscure complexities and nuances, and divert attention away from real problems left unaddressed by the claims.
 2. They deflect scrutiny from the truth that most of the benefits from increased production and consumption of industrialized dairy products in China flow to a tiny minority (i.e., the largest dairy firms and their investors).
 3. They close off encouragements to develop food habits and systems that are more diverse, more regionally self-sufficient.

Brief mention (non-academic reports):

1 Food and Agriculture Organization (FAO) of the United Nations. *Pathways towards lower emissions – A global assessment of the greenhouse gas emissions and mitigation options from livestock agrifood systems*. Rome: FAO, 2023 [link](#).

- “This FAO report presents a comprehensive global assessment of greenhouse gas emissions from livestock systems, utilizing FAO’s Global Livestock Environmental Assessment Model (GLEAM) based on the most recent available data. GLEAM also considers indirect emissions from upstream activities, such as feed and other inputs, and part of the downstream processes including post-farm transport, processing and packaging of raw products. Drawing from an extensive literature review, this publication illustrates pathways towards lower emissions through a set of interventions on both the supply and the demand sides of animal production.”

2 Food and Agriculture Organization (FAO) of the United Nations. *Achieving SDG 2 without breaching the 1.5 °C threshold: A global roadmap, Part 1 – How agrifood systems transformation . . . In brief*. Rome: FAO, 2023 [link](#).

- FAO “champions a holistic approach to transforming agrifood systems, aligning with the 17 Sustainable Development Goals (SDGs).”
- FAO’s roadmap involves “an extensive process, spans for three years, and initiated at the United Nations Climate Change Conference 2023 (COP28). Starting with a global vision to regional adaptation, exploring financial options, culminating in concrete investment and policy packages by COP 30.”
- It “introduces ten domains of actions and 20 key milestones”, including 1. Livestock, 2. Fisheries and aquaculture.
 - “The livestock sector requires intensified productivity via improved genetics and feeding practices, aiming to reduce resource usage. Prioritizing animal health and advocating for sustainable feed sources are essential, along with the shift toward integrated production systems and policies aligned with low-carbon practices.”
 - “Actions to drive the Blue Transformation encompass sustainable fishing practices, aquaculture productivity, equitable resource access, governance enhancement and innovative technology adoption, targeting fisheries and aquaculture for long-term sustainability and inclusive development.”



About Beacon

A project of Burning Questions Initiative

Why?

- Tiny Beam Fund's flagship *Burning Questions Initiative* produces a list of 'burning questions'. These questions were contributed by over 25 organizations and funders critical of and working to tackle industrial animal agriculture, especially concerning low- and middle-income countries (LMICs). These questions focus on topics that they would most like academic researchers to address and answer. The current (2023) list is [here](#).
- Every "burning question" is complex and multifaceted. It would be foolish to believe that there is a single, simple, definitive answer to a question.
- Addressing these questions requires welding together many pieces of nuanced, contextualized information, research findings, and perspectives drawn from a broad knowledge base, a rich knowledge bank, of studies by academic researchers.
- The purpose of this annotated list to help in the endeavor to build this knowledge base and knowledge bank, one brick, one coin, one academic study at a time.
- This building endeavor is arduous and laborious. But, "a journey of a thousand miles begins with a single step". We hope that our curated list — named *Beacon* — will serve as a beacon, guiding all those keen to take the first step.

Who's the audience?

- Those who have contributed to the 'burning questions', those who are curious about these questions, those who are interested in building the knowledge base to address the questions.
- Anyone can access *Beacon* on our website. It is easy to read and understand. No academic jargon!

What's in it?

- Each issue contains 6-8 main items. These are publications by academic researchers, mostly in peer-reviewed journals. Also included are reports written for Tiny Beam Fund by recipients of its *Burning Questions Initiative* fellowship awards (they are all PhD holders or PhD students close to obtaining their degrees). 1-2 "Brief mention" non-academic reports may also be included.
- Each main item is annotated with clear, useful key messages, and has only 300 or so words. Two items in each issue have additional "deep dive" sections to drill down a bit more.
- After the inaugural issue from October 2023, three issues of *Beacon* are offered in 2024.

[Read This Issue](#)