COVID-19’s impact on the food supply chain and sustainable livestock systems

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(From 2\textsuperscript{nd} November – Harper Adams University, Deputy Vice-Chancellor)
GASL From Crisis to Action – Lessons from COVID-19 for Building a Better Future through Sustainable Livestock

Objectives
Take-stock of impacts of pandemic on four areas of development and the role of livestock

1. Food and nutrition security
2. Livelihoods and economic growth
3. Animal health and welfare
4. Climate and natural resource use

Identify change priorities and pathways to build forward sustainable food systems via livestock.

Share current livestock related activities to minimize impacts of COVID-19
Global challenges, require scientific solutions

- Nutritionally poor diets
- Low farm incomes
- Pressure on Land use
- Climate change
- Over use of agro-chemicals and antimicrobials
- Covid-19
Covid 19 – Supporting the food sector

• Develop road-map of support across the food supply sector

• How we consume and access our food has changed – possibly forever

• Access to labour (international recruitment) has changed for how we grow and raise our food

• What we produce and how we supply it needs to change – opportunity to align with National Food Strategies – linking food and health

• Re-focus on obesity and metabolic syndrome driven by a poor diet due to increased risk of Covid-19
Covid-19 Shocks

- Food Production
- Food Processing
- Food retailers
- Consumers
Food Production - Challenges

• Access to labour (international work force)
• Fluctuating demand from milk processors leading to farmers having to dump their milk.
• Increased demand and order variability from retailers resulting in carcase imbalances and diminished revenues.
• Risk to global supply continuity for critical inputs for feed, supplements, and medicine/vaccinations.
• Increased scrutiny in how food is produced – wider issues of sustainability and what we eat.
Food Production - Response

• Investment in precision agriculture – efficiency and net zero
• Digitalisation and data management to support supply chains (virtual farms)
• Agricultural engineering working with the sector – new ways of farming
• Sustainability assessment - Farming for Health (what we should grow and raise for health)
• Prepare and influence delivery of the Agriculture Bill / CAP
• Decision support tools for farmers (e.g. C-tool kits and biodiversity)
Food Processing (meat sector) - Challenges

• Social distancing guidelines unpragmatic for meat processing sector where workers work at close quarters in a slaughter-line

• Conditions highly suitable for viral transfer (cold and humid)

• Sudden fluctuation in demand has resulted in beef carcase imbalance – leading to a significant pileup of high-value hindquarter meat usually destined for the foodservice sector

• Most inspection records and documents are handled manually by workers (i.e. kill sheet etc.), increasing risks of virus transmission

• Cold storages operating at full capacity with devalued frozen and prime cuts

• Reduction in conventional workforce capacity
Food Processing - Response

• Clear policy around scaling back on meat import at a time when national meat industries are facing carcase imbalance due to demand fluctuation.

• Improve supply chain resilience through investments in value chains (brand development and on-line presence) – links through to retail

• Job opportunities for willing local work force

• Setting up alternative distribution channels (home delivery logistics) to mitigate the inefficiencies of the predominant buyer-driven model.
Food Retailers - Challenge

• Lockdown put considerable pressure on meat and dairy markets, which resulted in unstable market prices and rapid changes in food distribution systems.

• News and viral videos of empty supermarket shelves influenced consumer confidence in food supply system - “stockpiling” buying behaviour.

• Waiting times for on-line deliveries a major issue for many

• Lack of key ingredients for ‘home cooking’ during lock down

• Interest in ‘sustainable options’ and a rise in buying local
Food Retailers - Response

• Addressing ways that consumers wish to shop (in store and on-line) and feel safe
• Huge shift to on-line purchasing but also the types of foods purchased – ‘more time to cook’
• Not just related to Covid-19 concerns – other issues around sustainability are on the increase – sustainability schemes and increased range in-store and on-line
• Investment in on-line presence and sustainability assessment schemes
• Local food boxes and house deliveries from small retailers as well as large supermarkets
Consumer

• Clear change in how consumers purchase and access their food

• Linked to the type’s of foods they wish to purchase and the time taken to prepare and enjoy (lockdown)

• Greater focus on other issues in relation to food – e.g. sustainability and animal welfare

• Covid-19’s greater impact on the obese and poor-health population has given a new focus on healthy eating

• Importance to tackle the cheap food paradox

• Vital that the correct information is disseminated about the role of livestock products in a healthy balanced diet (anti-livestock agenda)
Meat’s nutritional value vs environmental footprint

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<th>Nutrient</th>
<th>Unit (per 100 g meat)</th>
<th>RDI</th>
<th>Beef</th>
<th>Forage</th>
<th>Chicken</th>
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NI based global warming potential

![Graph showing kg CO2-eq/1% RDI for different meat types and production methods.](image-url)
Sustainable Livestock Systems

SOCIETY (PEOPLE)
- Food Quality & Safety
- Farmers Skills
- Rural Social & Economic Conditions

Health
(Soil, Plant and Animal Health)
- Food Supply
- Farmers Income
- Sustainable Food Products
- Soil/Water/Air
- Energy
- Biodiversity

ECONOMY (PROFIT)

ENVIRONMENT (PLANET)
External shocks to the Agricultural and Livestock Sector

Covid-19

Social Change

Injustice

International Trade

Urbanisation

Climate Change

Shocks need to be tackled in concert and not separately