Animal Welfare Standards: Poultry Perspective

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Animal Welfare and Animal Welfare Standards in Context

• Food supply
  • Food surpluses allow a society to grow/learn/work towards common goals including food animal welfare

• Food safety

• The Environment
  • Sustainability (land, feedstuffs, housing, waste)

• Social ethics
Consumer Choices
Broilers in the US (~9 billion produced in 2017)
Fresh market in Europe
Slow-growing broilers in Asia
Animal Welfare Standards: What do we need?

- Dialogue and collaboration among genuine stakeholders to work towards science based standards/requirements that improve bird welfare

- Barriers for implementation:
  - Arbitrary requirements
  - The perception/reality that requirements are moving targets or that the goal posts are moving away too fast
## Animal Welfare Standards

<table>
<thead>
<tr>
<th>BROILERS</th>
<th>LAYERS</th>
<th>TURKEYS</th>
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</thead>
<tbody>
<tr>
<td>NCC</td>
<td>UEP</td>
<td>NTF</td>
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<tr>
<td>GAP</td>
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<td>AWA</td>
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<tr>
<td>McDonalds, Yum, Wendy’s Unilever</td>
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</tbody>
</table>


Global Animal Partnership’s (GAP) Standards for Chickens Raised for Meat v3.1

• The GAP standards elicit comments:
  • Agenda for welfare commitments primarily driven by ‘non-meat eater’ groups
  • Some key requirements are moving targets
  • Some key requirements are arbitrary/prescriptive
  • Animal welfare value vs. added cost incurred
  • Do not address sustainability in a balanced and holistic manner
<table>
<thead>
<tr>
<th>Standard Category</th>
<th>GAP Version</th>
<th>Standard</th>
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<tbody>
<tr>
<td>Growth Rate</td>
<td>2.0</td>
<td>No maximum stated</td>
</tr>
<tr>
<td>Growth Rate</td>
<td>3.1</td>
<td>68 gr (0.15 lb) per day</td>
</tr>
<tr>
<td>Growth Rate</td>
<td>2024</td>
<td>?</td>
</tr>
<tr>
<td>Lighting</td>
<td>2.0</td>
<td>20 lux</td>
</tr>
<tr>
<td>Lighting</td>
<td>3.1</td>
<td>50 lux</td>
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<tr>
<td>Lighting</td>
<td>2022</td>
<td>windows for tier 2</td>
</tr>
<tr>
<td>Stocking Density</td>
<td>2.0</td>
<td>7.0 lb/ft², 6.5 lb/ft²</td>
</tr>
<tr>
<td>Stocking Density</td>
<td>3.1</td>
<td>6.5 lb/ft², 6.0 lb/ft²</td>
</tr>
<tr>
<td>Stocking Density</td>
<td>2020</td>
<td>6.0 lb/ft², 6.0 lb/ft²</td>
</tr>
</tbody>
</table>
GAP Standards: Current concerns

- Main concerns
  - Light intensity
  - Natural light/windows
  - Stocking density
  - Breed selection

- Other
  - No mammalian or avian by-products in feed
  - “Chickens that are given antibiotics, ionophores, beta agonists, sulfa drugs and/or arsenic-based drugs are prohibited from being marketed as Step-rated.” (punitive)
Light intensity/Natural light

• Step 1-5+, 50 lux (4.6 foot candles)
• Step 2-5+, by year 2022 provide natural light (windows) to an area > 1% of total floor space (exempt form the 50 lux requirement).
• 50 lux
  • New understanding of chicken vision (tetra-chromatic vision)
  • What are the chickens preferences as it relates light intensity, spectrum and gradients)?
  • Cost of implementation

• Natural light/windows
  • Decreased livability
  • Increased feed conversion ratio
  • Cost of implementation
Stocking density

- Step 1-2, for birds placed from 1 January 2018 to 30 June 2020, stocking density must not exceed 6.5 lbs/ft²
- Step 1-2, for birds placed from 1 July 2020 onwards, stocking density must not exceed 6 lbs/ft² (29 kg/m²)
- Arbitrary
- Welfare of a 9 lb. broiler better at 1.5 ft² vs. 1 ft²?
Breed selection

- Steps 4-5, require breeds of chickens with higher welfare outcomes.
- Efficient, high-yielding strains now used by the poultry industry qualify to Steps 1-3.
- Perceived bias against efficiency and sustainability.
Table-Egg Layer Housing: An example of moving too fast
The production of **clean and unbroken eggs** is at the heart of the historical evolution of commercial layer housing design.
The Demand for Cage Free Eggs

- Restaurants, food manufacturers, food service, hotels and travel companies are committing to switching to cage free eggs.
- Cage free production appears to be the future alternative to conventional cages.
- Enriched cages no longer an alternative
The current U.S. non-organic, cage-free table egg layer flock is estimated to be 13 million hens, producing approximately 3.5 billion eggs each year.

As of March 1, 2016, over 60 U.S. companies that sell eggs as part of their services have publicly committed to using 100% cage-free eggs by 2025. These companies represent a cross-section of the food sector and include 8 grocery chains, 34 restaurants, 10 food manufacturers, 5 foodservice distributors, 6 hospitality firms, and 1 food/drug retailer (not counting firms that are already 100% cage-free).

At current usage and production rates, the 34 restaurants, 8 grocery chains, and 5 foodservice distributors alone will require over 27 billion cage-free eggs per year to meet their commitments, requiring a cage-free flock of over 101 million hens by 2025. And this does not account for the remaining food sectors and for changes in demand and production rates.

Source: USDA AMS Agricultural Analytics and Market News; NASS

- Three housing systems: conventional cage (CC), enriched colony (EC) and cage-free aviary (AV).
- Michigan State, UC Davis, Iowa State and USDA ARS.
- Commercial farm in the Midwest, all three housing systems in the same location.
Battery cages with manure belts

Source: Coalition for Sustainable Egg Supply
Enriched Colony Cage

Source: Coalition for Sustainable Egg Supply
Cage-Free Aviary

Source: Coalition for Sustainable Egg Supply
## Animal Health & Well-Being

**KEY:**
- **HOUSING TYPES:**
  - EC: Enriched Colony
  - AV: Cage-Free Aviary
  - CC: Conventional Cage

### Impact Scale

- **-3:** Exceptionally Worse
- **-2:** Substantially Worse
- **-1:** Slightly Worse
- **0:** Similar
- **+1:** Slightly Better
- **+2:** Better
- **+3:** Slightly Exceptional Better
- **+4:** Exceptionally Better

### Negatively Impacted Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Enriched Colony (EC)</th>
<th>Cage-Free Aviary (AV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality</td>
<td>EC</td>
<td>AV</td>
</tr>
<tr>
<td>Behavior</td>
<td>EC</td>
<td>AV</td>
</tr>
<tr>
<td>Cannibalism/Aggression</td>
<td>EC</td>
<td>AV</td>
</tr>
<tr>
<td>Keel Damage</td>
<td>EC</td>
<td>AV</td>
</tr>
<tr>
<td>Tibia/Humerus Strength</td>
<td>EC</td>
<td>AV</td>
</tr>
<tr>
<td>Stress Physiology</td>
<td>EC</td>
<td>AV</td>
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<tr>
<td>Feather Condition</td>
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<td>AV</td>
</tr>
<tr>
<td>Foot Condition</td>
<td>EC</td>
<td>AV</td>
</tr>
<tr>
<td>Environmental Comfort</td>
<td>EC</td>
<td>AV</td>
</tr>
<tr>
<td>Feeding and drinking</td>
<td>EC</td>
<td>AV</td>
</tr>
</tbody>
</table>

### Positively Impacted Parameters

- **EC:** Enriched Colony
- **AV:** Cage-Free Aviary
- **CC:** Conventional Cage

**Source:** CSES
Keel Fractures

Source: University of Guelph, Animal Biosciences
Pecking/Cannibalism

- Case report
- Brown hens; cage-free organic production
- Increased mortality starting at 40 wk-old; 0.4% per week
- 50% of the mortality from vent pecking/cannibalism
Cage-free and parasitic diseases

• Feco-oral exposure elevated:
  • Protozoa: Coccidia, Histomonas
  • Nematodes: Ascaridia, Heterakis (cecal worm), Capillaria
Final thoughts

• The poultry industry evolved to satisfy society’s demand for an ample, safe, affordable and sustainable poultry supply.
• The social ethics of food animal use are changing so industry, scientists and veterinarians are responding.
• Dialogue and debate amongst genuine food animal welfare stakeholders has lead to improvements in animal welfare
The International Poultry Welfare Alliance (IPWA) seeks to drive overall improvement of poultry welfare by fostering open dialogue, sharing best-practices, and supporting science-based research via a global, multi-stakeholder alliance.

The U.S. Roundtable for Sustainable Poultry and eggs seeks to maintain the United States reputation as a trusted global leader in environmentally sound, socially responsible, and economically viable poultry production by advancing, supporting and communicating continuous improvement through leadership, innovation, multi-stakeholder engagement and collaboration.
Thank You