Innovations to Improve the Sustainability of Commercial Poultry Production

Georgie Cartanza
Delmarva Produced 9.6% of U.S. Poultry

<table>
<thead>
<tr>
<th>State</th>
<th># Sold</th>
<th>Pounds Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delaware</td>
<td>303.5 million</td>
<td>1.851 Billion</td>
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<tr>
<td>Maryland</td>
<td>252.5 million</td>
<td>1.843 Billion</td>
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<tr>
<td>Virginia</td>
<td>269.1 million</td>
<td>1.533 Billion</td>
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<tr>
<td>Total</td>
<td>825.1 million</td>
<td>5.229 Billion</td>
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14,000 sq km 5400 sq miles
THE CHALLENGES

• Connecting with Consumers / Prosumers
• NGO’s influence on Legislation
• Management of Nutrient & Resources
• Biosecurity Disease Outbreaks (Avian Influenza)
• Economic Viability of Integrators and Growers
SOCIAL LICENSE TO OPERATE

• Recognize the power of NGO’s
• Animal agriculture is under attack

  • “Public Truth is Not Defined By Our Reality- It is Defined by the Publics Perception of Reality.”
  • Don’t confuse fighting with leading.
  • We need to “Connect, Engage, Protect” Animal Ag Alliance
  • The world is run by people that show up...
How did we get here?

Environmental Stewardship
INNOVATIONS IN POULTRY WELFARE

Monday 2:00
• Probroed & Sloot Hatchery Germany
• Early Chick Feeding
• Less Stress
• Improved gastrointestinal health and immunity
ON FARM HATCHING

- X-Trek Vancomatic
- Transfer at 18 days of incubation
eggXYt

- 7 BILLION Male Chicks euthanized each year in the layer industry
- $1.4 Billion Loss in the U.S. Layer industry
MALE EGG BIOMARKER

• Allows Male eggs to be identified prior to incubation
• Egg passes under a light that shows the male egg to be a different color
• Doubles hatchery space
• Reduces incubation costs
• Removes the need for manual sexers
• Saves on Feed Cost
• For the consumer- premium ethically-grown male chick culling free eggs
Automated tools for farmers to continuously monitor welfare and health of birds
Livestock Transport Devices
Collects Real Time Data and Alarms Driver
Thermal Imaging rather than ambient temperature monitoring for environmental control
Artificial Intelligence
Robotics- Faromatics Chicken Boy
VISION -BASED EARLY WARNING SYSTEM

Fancom eYenamic
ENVIRONMENTAL: AIR EMISSIONS, NUTRIENT MANAGEMENT

- Heat Exchanger Technology to mitigate dust, particulates and ammonia
- Manure to energy
- Alternative uses for manure
- Air Scrubbers
BIOSECURITY
IN-VEssel COMPOSTING

Composting, Simplified
It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change.

— CHARLES DARWIN
THANK YOU