



# Sustainability Implications to Food Animals Raised Without Antibiotics

**Dr. Matthew J. Salois, PhD**

*Chief Economist*

American Veterinary Medical Association

September 26<sup>th</sup>, 2018

## AVMA – collective voice of the veterinary professions

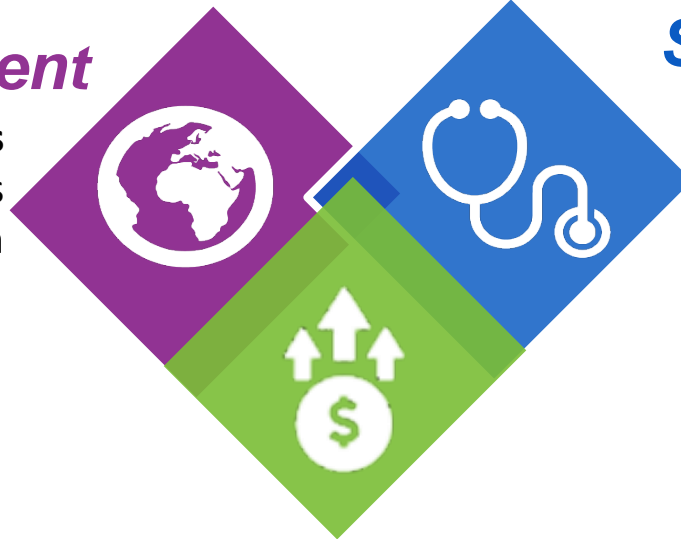
- More than 91,000 members
  - Government
  - Industry
  - Uniformed services
  - Academia
  - Private/Corporate Practice
- Not-for-profit founded in 1863
- Protect, Promote, Advance the veterinary profession

# Defining Sustainability

Environmentally Sound, Economically Viable, and Socially Responsible

## *Environment*

**Natural Resources**  
Environmental Amenities  
Preservation & Conservation



## *Social*

**Animal health & welfare**  
Human Health & AMR  
Food Safety & Nutrition

## *Economic*

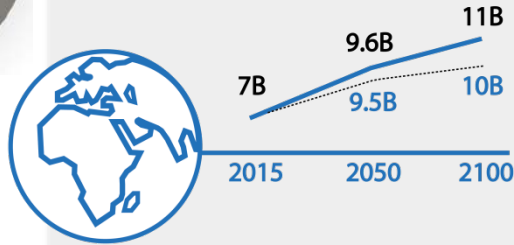
Farm Livelihood  
Food Affordability  
Consumer Acceptance

# One Health & Sustainability Link → Efficiency



**60%**

Increase in demand

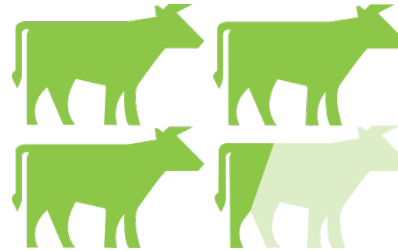


People



**20%**

Lost to disease



Animals



**1.6 planets**

Overusing natural resources



Planet



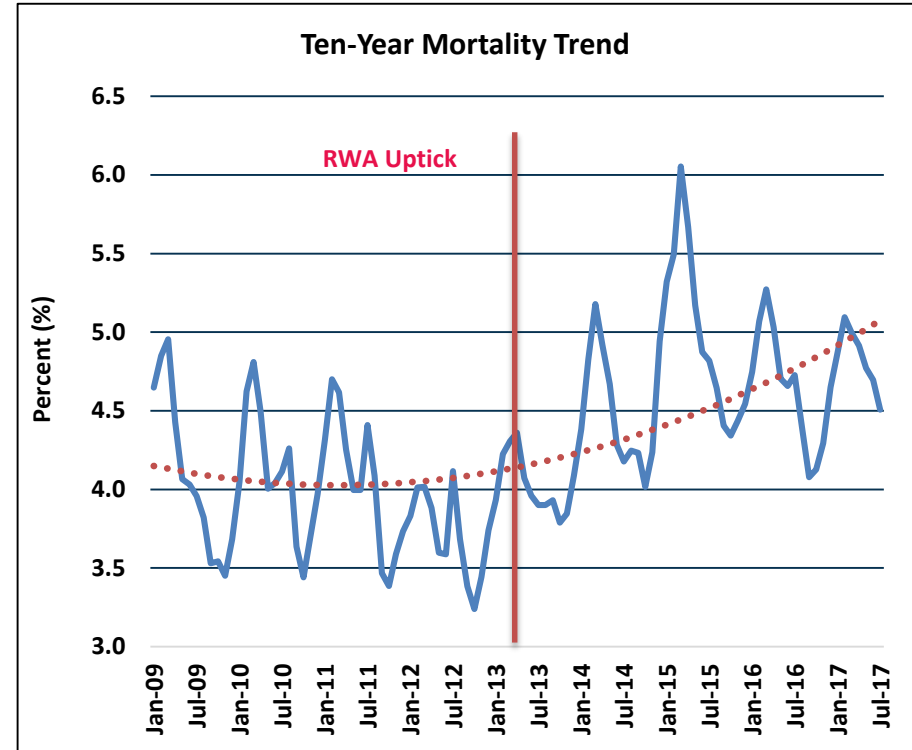
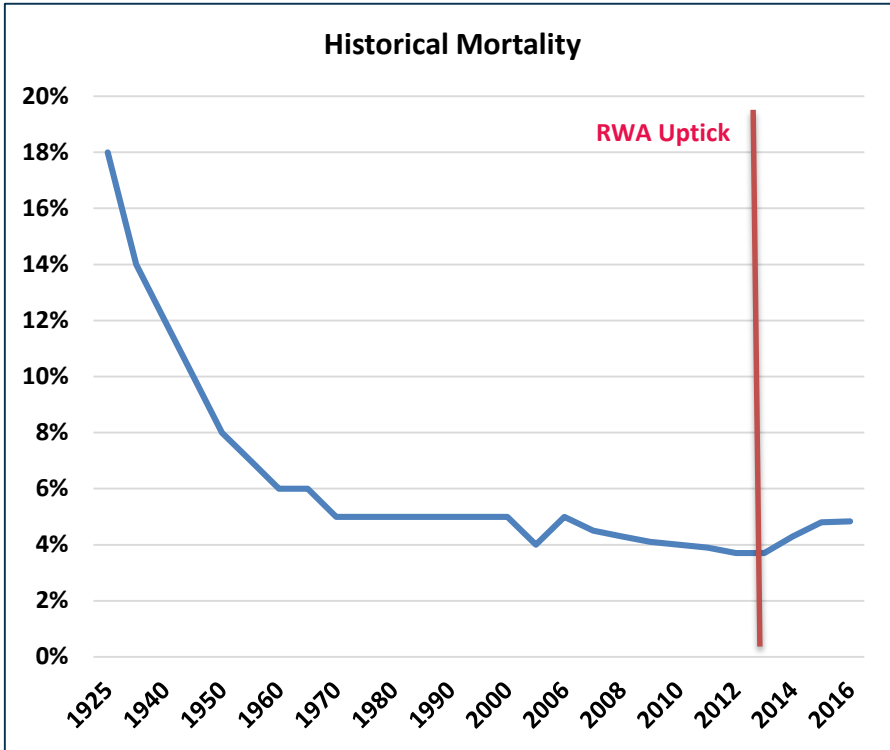
Sources: FAO, 2012, World Agriculture Towards 2030/2050, Tables 3.4 & 3.5, pp. 68-69

Food and Agriculture Organization of the United Nations. *Surge in diseases of animal origin necessitates new approach to health – report*. 16 December 2013.

Earth Overshoot Day 2015. 2015. Retrieved from <http://www.overshootday.org/>

International Consumer Attitudes Study (ICAS)

# Mortality Trending Up for First Time in 90 Years





# RWA Impacts Morbidity & Animal Welfare

Decline in Bird Health (a Look at three serious conditions)

- 3.5x greater risk of ammonia burns in the cornea causing burning and irritation
- 1.4x greater risk of severe foot lesions causing lameness and decreased mobility
- 1.5x greater risk of severe airsacculitis leading to death

In addition to delayed treatment and increased mortality, other symptoms on the rise

# Efficiency Impact of 100% RWA Market

## *RWA vs. Conventional*



**Mortality**  
+ 25 – 50% ↑



**Grow-out Time**  
+ 3 – 5% ↑



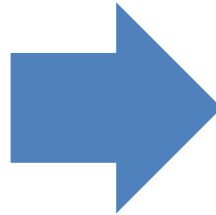
**Feed Conversion**  
+ 2 – 5% ↑



**Bird Density**  
+ 5 – 12% ↑



**Downtime Days**  
+ 20 – 30% ↑



## More Birds Needed to Meet Demand



**680 and 880 million more birds  
need to meet consumption  
chicken levels in the USA**





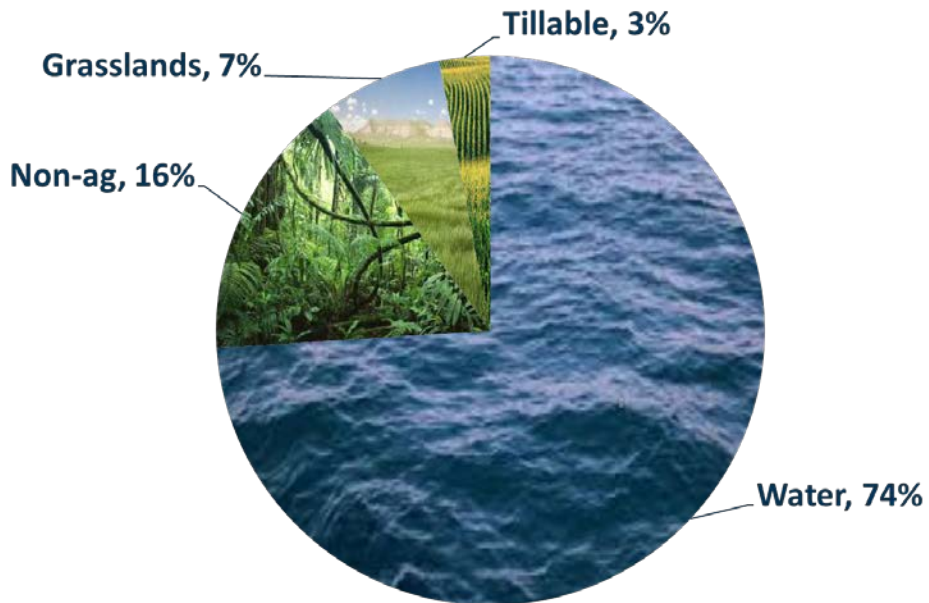
# Environmental Impact of 100% RWA

- 5.4 to 7.2 million more tons of feed/year (roughly equal to rail cars filled with grain that spans 655 to 873 miles)
- 1.9 to 3.0 billion more gallons of water consumed by the birds (about the water consumed annually by 3,400-5,400 families of four in the U.S.)
- 3.9 to 5.2 thousands of more square miles of land to grow the feed (About 10x the size of Los Angeles)
- 4.6 to 6.1 million more tons of manure (Approximately equal to the amount of sewage produced by the people in Texas annually)

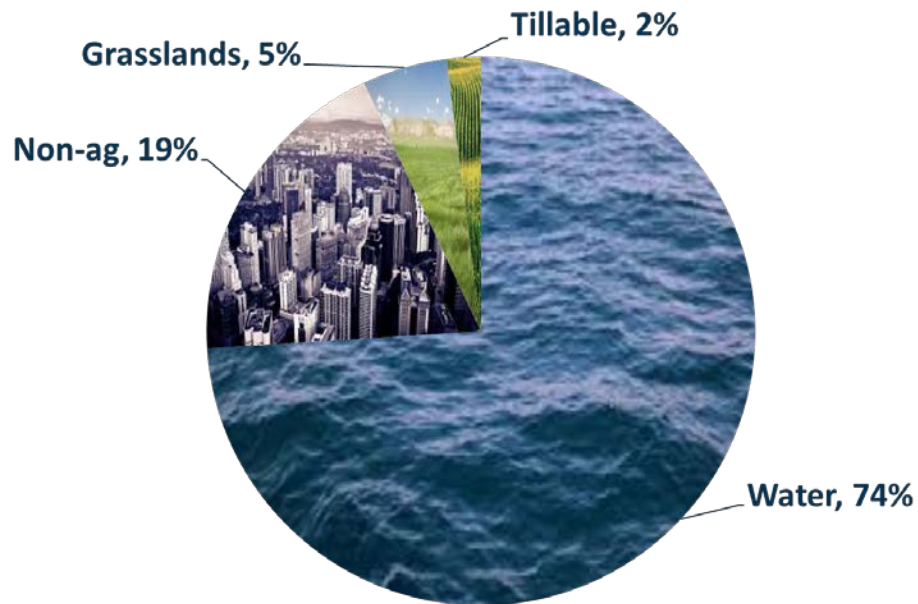


# Our Finite Earth Resource

(0.5 ac/person – 2016)

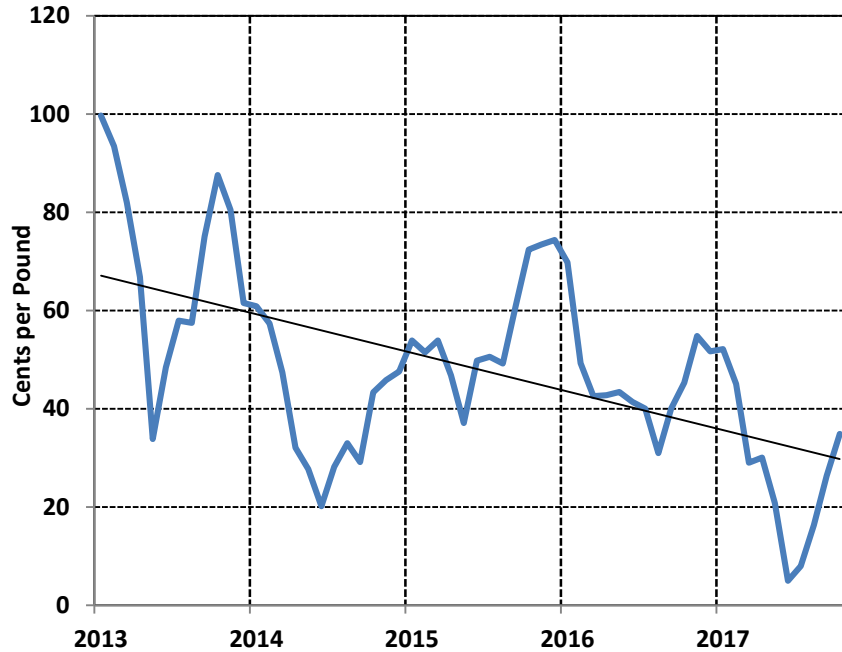


(0.3 ac/person – 2050)

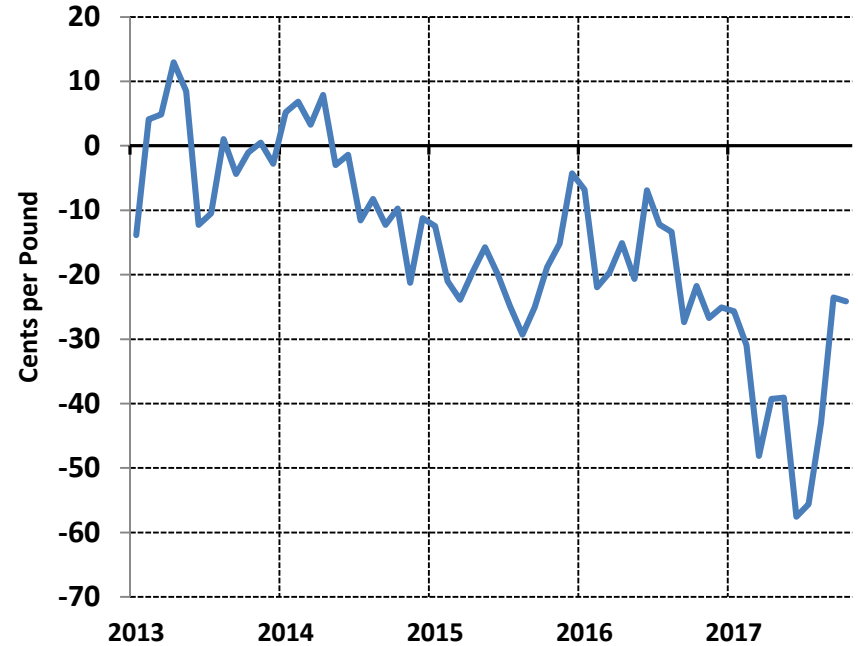


# RWA Broiler Premiums by Cut

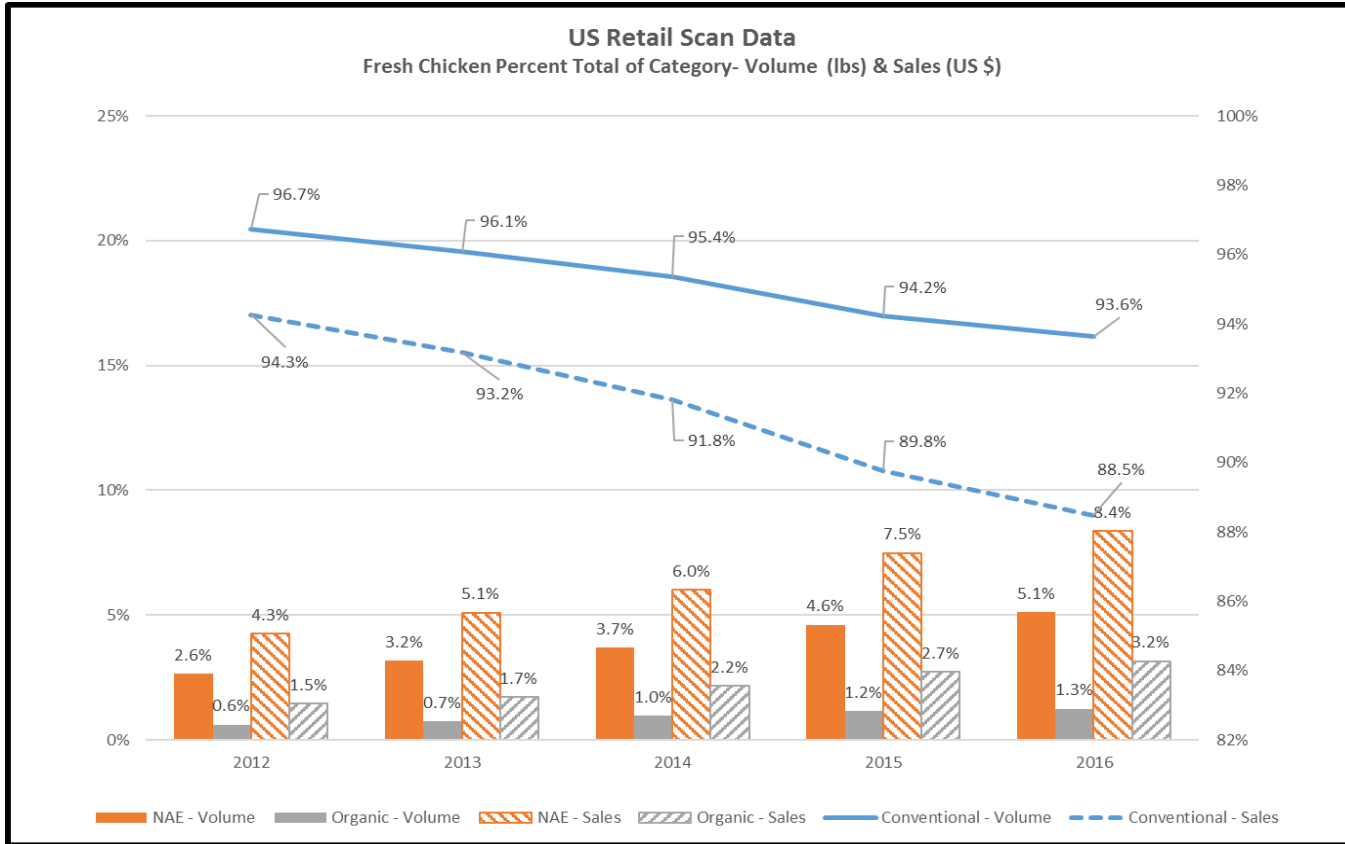
## B/S Breast Unsized RWA vs. Conventional



## Whole Wings RWA to Conventional Spread



# Fresh Chicken Percentage of Total by Category



Conventional Chicken holds 89% of sales dollaers over other organic & NAE / RWA in the retail case, and is 94% of total volume.



# Consumer Confusion on Production Statements

## Knowledge Level on Care of Chickens Base: Purchase Chicken (961)

- 40% not at all knowledgeable
- 47% Somewhat knowledgeable
- 13% Very knowledgeable

## Perceived Accuracy of Statements about Care and Raising of Chickens Base: Purchase Chicken (961)

	True	False
There are added hormones or steroids present in most chicken meat	76%	24%
There are antibiotics present in most chicken meat	75%	25%
Most chickens are genetically modified to grow bigger and faster	71%	29%
Most chickens raised to be eaten are raised in cages	71%	29%
The way most chickens are raised increases their risk of getting Avian influenza	54%	46%
Eliminating antibiotics leads to significantly more chickens dying of disease	49%	51%
The majority of raw chicken meat contains salmonella	46%	54%

C12. How knowledgeable do you consider yourself to be on the care of chickens? In this survey, the care of chickens is defined as how chickens are raised, housed and fed.

C15. Please indicate whether you believe each of the following statements to be true or false.



**THANK YOU**

