The (U.S.) Farming Population Often Fits the Stereotype

- 86% male
- 99% white
- Average age 58 years
- Average 25 years farming
- 48% list farm as main income

Essential to Find Common Ground

Hobbies
Family
Location
Lifestyle
Education
Animals

We Need to Base Discussion on Science, but Start Conversation with Common Ground

“As an animal scientist, sustainability researcher and mother of a highly active toddler... feedlot beef is my choice for my family.”

THE WALL STREET JOURNAL

JOURNAL REPORTS: LEADERSHIP

Is Feedlot Beef Bad for the Environment?

Robert Martin says the pollution spreads for miles; Jude L. Capper says the beef industry keeps things safe

“We need to…” not “You need to…”

We are all part of the same industry with a common goal. It’s not “us” vs. “them”, it’s “we".

Source: Created by and photo credit: Dr. Jude L. Capper, 2015
Consumers and Farmers Respond Positively When Values are Shared

Values relating to animal welfare, social responsibility, environment and economic issues shared across systems

Source: Created by Dr. Jude L. Capper, 2015
Consumers Trust Friends/Family, Government and Farmers/Ranchers

Source: Created by Dr. Jude L. Capper, 2013. Data from Sullivan, Higdon & Sink (2013) “Building Trust in What We Eat.”
http://www.shafodthink.com
Consumers Trust Friends/Family, Government and Farmers/Ranchers

- Retailers: 32%
- Media: 21%
- Bloggers: 18%
- Food Co's: 17%
- TV Shows: 13%
- Big Pharma: 10%
- Politicians: 8%

Who Do Farmers Trust for Climate Change Information?

- Scientists: 42%
- Farm Assn: 40%
- Farm Press: 34%
- Conservation NGO: 33%
- State Gov.: 28%
- Agribusiness: 24%
- Federal Gov.: 23%
- Environment NGO: 18%
- Mainstream Press: 9%

Source: Created by Dr. Jude L. Capper, 2013. Trust = somewhat or strongly trust, according to information from: Arbuckle et al. (2013) Understanding farmer perspectives on climate change adaptation and mitigation: The roles of trust in sources of climate information, climate change beliefs, and perceived risk. Environment and Behavior.
What are the Farmer’s Concerns?
Farmer Concerns

- Economic Viability
- Market Access
- Government Regulation
- Resource Availability
- Animal/Crop Productivity
- Taxes
- NGO/Activist Campaigns
- Processor/Retail Demands
Farmers are Consumers Too: May Have Same Concerns

10 Foods Americans Eat That Are Banned in Other Countries

Internet sites are main source of food information, followed by TV shows, and friends/family.

We are All Entitled to our Beliefs, but...

“...they may be irrational, based on invalid or selective information, be self-serving, or otherwise fail to correspond to reality.”

A CONSPIRACY THEORY FOUND ON YOUTUBE? PLEASE, DO TELL ME MORE...

Decision Making: Cultural Cognition

“Everybody knows that…”

Beliefs about controversial issues dependent on culture and opinions of people with shared values.

Anti-GMO Campaigns Focus on Fear and “Big Ag/Big Food” Claims

Source: Created by Dr. Jude L. Capper, 2013. Picture from: https://dlasp.org/uploads/images/91873d7927efb5f5d6e9a.png
We don’t have time to fully research or understand complex issues, so make decisions with limited information.

Spectre of Britain's first cattle factory: £50m plan for megafarm that houses 8,000 cows in sheds the size of 22 football pitches

By DAVID DERBYSHIRE FOR MAILONLINE
UPDATED: 11:07, 6 August 2010

Plans for Britain's first cattle factory where 8,100 'battery cows' will be milked around the clock were unveiled yesterday.

The industrial-scale farm will house the UK's largest dairy herd in Western Europe inside giant metal sheds with little access to green grass or sunshine.

The farm will produce a staggering 420,000 pints of milk every day, while waste from the cattle will be used to generate electricity for the national grid.

100 clone cows on UK farms: Shocking evidence of how 'super calves' have secretly spread into our food system

By SEAN POULTER FOR THE DAILY MAIL
UPDATED: 09:54, 3 August 2010

More than 100 cows descended from cloned cattle have been born on British farms, sparking alarm about their secret spread into the food system.

An investigation has been launched after a farmer claimed milk from a cow born to a clone had gone into high street shops without any special labelling.

Activist Groups Use Powerful Images to Imply that Dairy Welfare is Less than Optimal

‘Real Milk’ Comes From Real Sick Cows. Try Soy Milk.

Up to 50% of cows on dairy farms have infected udders.

Activist Groups are Using Consumer-Friendly Metrics to Push Agendas

Source: Created by Dr. Jude L. Capper, 2012; Photo from: https://www.shutterstock.com/image-photos/activists-splashing-water-in-bath?src=1Q1Cg5X5uZj1W3gsJw0CcQ-1-2
Data Adds Credibility – National Geographic Example

How Much H₂O is Embedded in Everyday Life?

You might be surprised at how much water it takes to bring that hamburger to your plate or to make your favorite t-shirt. Compare apples to oranges, beer to wine, wind power to coal—and see how your choices add up.

1 pound (0.8 kilograms) of beef requires:
1,799 gallons (6,810 liters) of water
≈ 3 pounds (3 kilograms) of grain for feed, plus irrigation water
≈ 56.4 pounds (16.4 kilogram) of roughage or grasses for feed, plus irrigation water
≈ 18.6 gallons (70.5 liters) of additional water for drinking and processing

1 pound (0.8 kilograms) of chicken requires:
468 gallons (1,773 liters) of water
≈ 9.8 pounds (9.9 kilograms) of grain for feed, plus irrigation water
≈ 2.4 gallons (9.1 liters) of additional water for drinking and processing

“How much H₂O is Embedded in Everyday Life?
...Compare apples to oranges, beer to wine, wind power to coal—and see how your choices add up.”

Source: Created by Dr. Jude L. Camper, 2015; Picture from: http://environment.nationalgeographic.com/environment/water/embedded-water
Incorrect Data Mislead the Reader and May Bias Food Choices

Water Footprint

Product Gallery

Productgallery
Beef

Water footprint: 15500 litres of water per kg of beef.

In an industrial beef production system, it takes in average three years before the animal is slaughtered to produce about 200 kg of boneless beef.

The animal consumes nearly 1300 kg of grains (wheat, oats, barley, corn, dry peas, soybean meal and other small grains), 7200 kg of roughages (pasture, dry hay, silage and other roughages), 24 cubic meter of water for drinking and 7 cubic meter of water for servicing.

This means that to produce one kilogram of boneless beef, we use about 6.5 kg of grain, 36 kg of roughages, and 135 litres of water (only for drinking and servicing). Producing the volume of feed requires about 15300 litres of water in average.

Source: Created by Dr. Jude L. Camper, 2015; Picture from: http://www.waterfootprint.org/products.html
“Meat Free Mondays” are Heavily Promoted

Source: Created by Dr. Jude L. Capper, 2014. Photos from:
http://www.thetimes.co.uk/sto/multimedia/archive/00274/Meat_Free_Monday_Pic_273456a.jpg and
https://beatlememo.files.wordpress.com/2015/06/1126309_1291981275143_53rwa_500_707.jpg
Meat Production is Not the Only Contributor to UK Carbon Emissions

According to data from the Dept. of Energy and Climate Change (2011), meat production accounts for 3.9% of total UK greenhouse gas emissions.

IF EVERYBODY IN THE UK WENT MEATLESS EVERY MONDAY FOR AN ENTIRE YEAR...

...THE NATIONAL CARBON FOOTPRINT WOULD DECREASE BY LESS THAN ONE PERCENT

Source: Design, wording and data copyright held by Dr. Jude L. Capper, 2012; Photo from: http://www.laverstokepark.co.uk/@content/pub/image_1813/200g_Fie_20498.jpg
Hormones in Food are Undesirable, Yet Lifestyle-Related Hormones are Acceptable

One 8 oz steak from an non-implanted animal contains 3.5 ng of estrogen, one from an implanted animal contains 5.1 ng estrogen

One birth control pill = 35,000 ng
If We Can’t Measure, We Can’t Improve

Beef/Animal:
1977 = 274 kg
2007 = 351 kg
2027 = 405 kg?

Source: Created by Dr. Jude L. Capper, 2015; Data from USDA-NASS (2009) [http://www.nass.usda.gov/Data_and_Statistics/Quick_Stats/]
If We Can’t Measure, We Can’t Improve

1977
3,045 Animal Days

2007
1,940 Animal Days

If We Can’t Measure, We Can’t Improve

<table>
<thead>
<tr>
<th></th>
<th>1977</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animals</td>
<td>70%</td>
</tr>
<tr>
<td>Feed</td>
<td>81%</td>
</tr>
<tr>
<td>Water</td>
<td>88%</td>
</tr>
<tr>
<td>Land</td>
<td>67%</td>
</tr>
<tr>
<td>Carbon Footprint</td>
<td>84%</td>
</tr>
</tbody>
</table>

*All values expressed per lb of beef produced

In reply to @bovidiva because some geek setting in a cubical in New York City never will understand animal husbandry and shouldn't have say

Tangible impacts (e.g. improved growth) are easy to accept. Intangible (e.g. consumer perception) are less easy.

Source: Created by Dr. Jude L. Capper, 2015.
Improving Milk Yield Reduces Feed Use per Unit of Milk

- **Productive Efficiency**
  - 1.23 kg/l
  - 0.93 kg/l
  - 0.66 kg/l
  - 0.59 kg/l

- Feed Intake (dry matter kg/d)
  - 16.6
  - 18.5
  - 22.9
  - 25.1

13.5 l/d, 20.0 l/d, 35.0 l/d, 42.4 l/d

Source: Created as an example by Dr. Jude L. Capper, 2016; Based on nutrient requirements for a 681 kg Holstein dairy cow (3.8% fat, 3.1% protein) fed a characteristic total mixed ration balanced for nutrient requirements.
Improving Milk Yield Reduces Feed Costs per Unit of Milk

Feed costs (US $/l milk)

$0.63/l Milk

$0.27/l Milk

Yield (l/d)

Source: Created as an example by Dr. Jude L. Capper, 2010; Based on nutrient requirements for a 681 kg Holstein dairy cow (3.8% fat, 3.1% protein) fed a characteristic total mixed ration balanced for nutrient requirements and feed costs of $0.47/kg dry matter
Population Learning Styles

When faced with new ideas, we tend to have a preferred learning style. Need to use these to communicate effectively.

Source: Created by Dr. Jude L. Capper, 2015.
99% preference for hands-on learning or demonstration (96%) vs. discussion (87%) or one-on-one (85%)

There Will Always Be A Proportion of Farmers Whose Opinions are Fixed

Focus here

Opinion of Product X

Source: Created by Dr. Jude L. Capper, 2015
Social Media Offers Significant Opportunities – Europe and USA

- Facebook: 1.5 billion
- YouTube: 1.0 billion
- LinkedIn: 347 million
- Twitter: 316 million
- Instagram: 300 million
- Pinterest: 70 million

Social Media Offers Significant Opportunities – Global

- Facebook: 1.5 billion
- YouTube: 1.0 billion
- WhatsApp: 800 million
- Instagram: 549 million
- Twitter: 316 million
- LinkedIn: 347 million
- Google+: 300 million
- Pinterest: 70 million

A state with 1.5 beef cows per person...

...producing enough BEEF to feed 13.2 million people each year...

...Montana. It's cattle country.
Communication Summary

- Shared values and relationship building are crucial
- Farmer concerns more important than fine detail
- Science needs to be put into context
- Focus on those whose minds we can change
- Social media becoming increasingly important

Thank you!

jude@livestocksustainability.com
http://bovidiva.com/presentationlinks

Savage Chickens
by Doug Savage

THE HISTORY OF
YOU SUCK!
COMMUNICATION!
U SUCK! IP

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