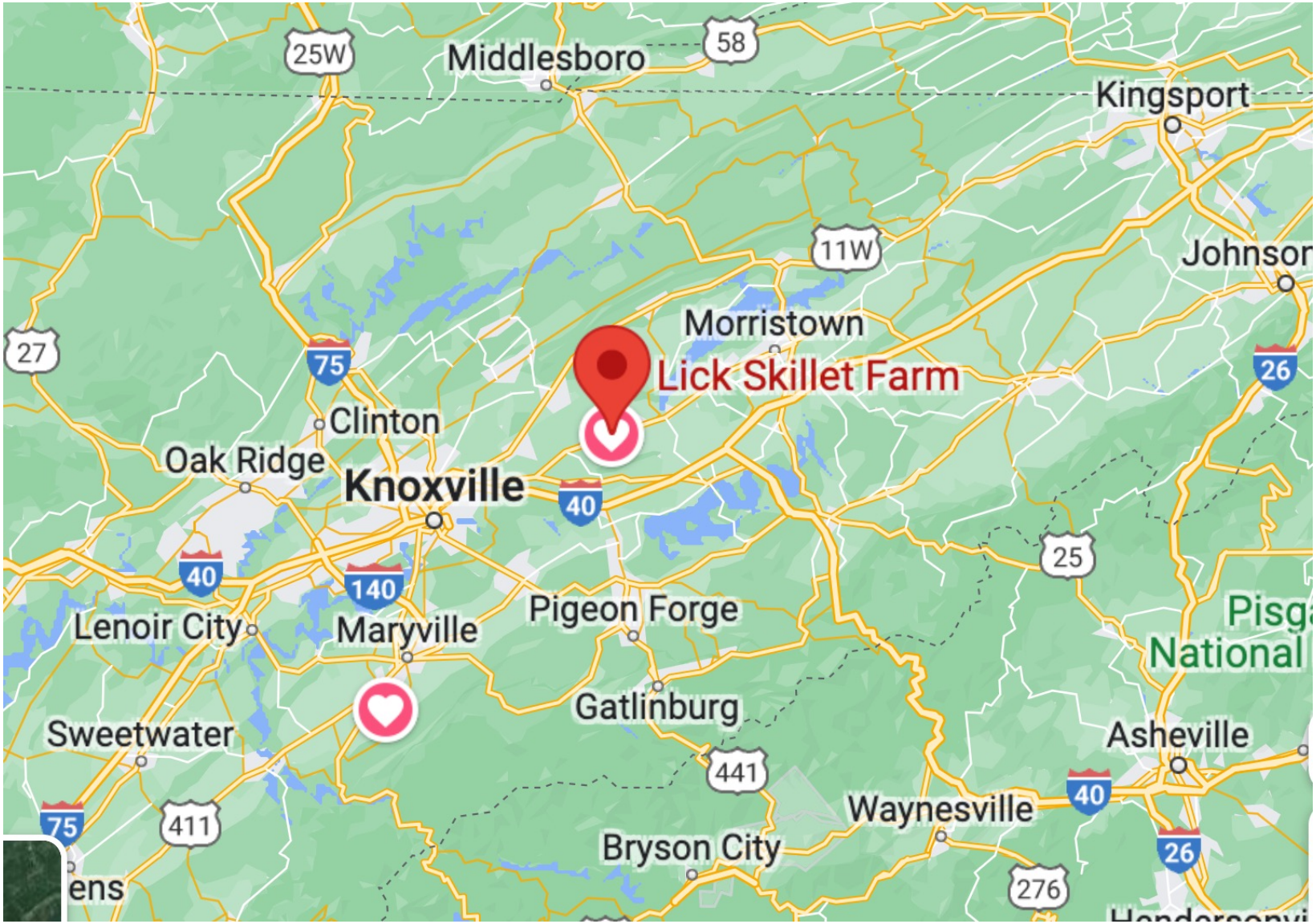
Our Disappearing Farms

What is happening, why it matters, and what you can do about it.

Alex Miller
William B. Stokely Chair of Management,
Haslam College of Business,
University of Tennessee

7th Generation Farmer,
Lick Skillet Farm,
New Market TN


Middlesboro
Kingsport
Morristown
Lick Skillet Farm
Clinton
Oak Ridge
Knoxville
Lenoir City
Maryville
Pigeon Forge
Gatlinburg
Sweetwater
Asheville
Waynesville
Bryson City
25W
58
11W
27
75
26
40
140
25
441
411
276

LickSkillet.Farm

LickSkillet.Farm

LickSkillet.Farm

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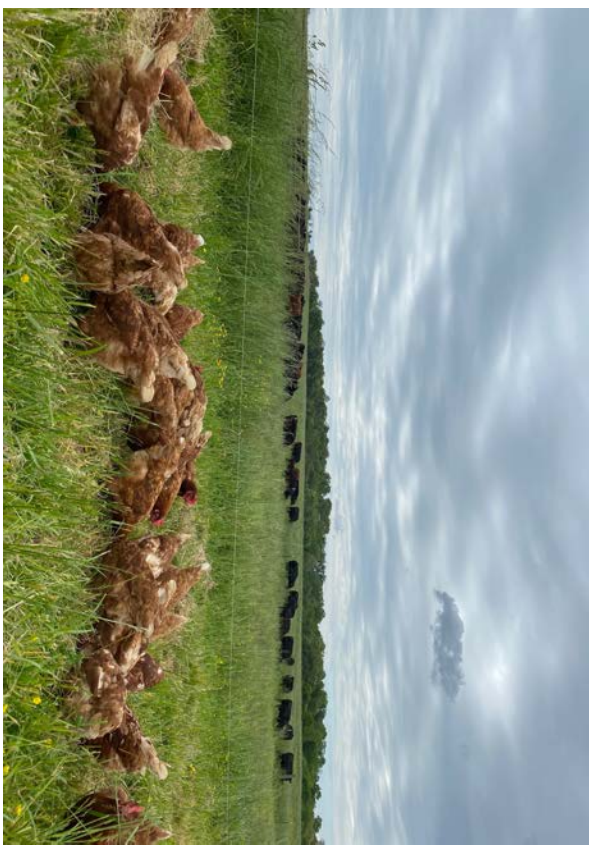

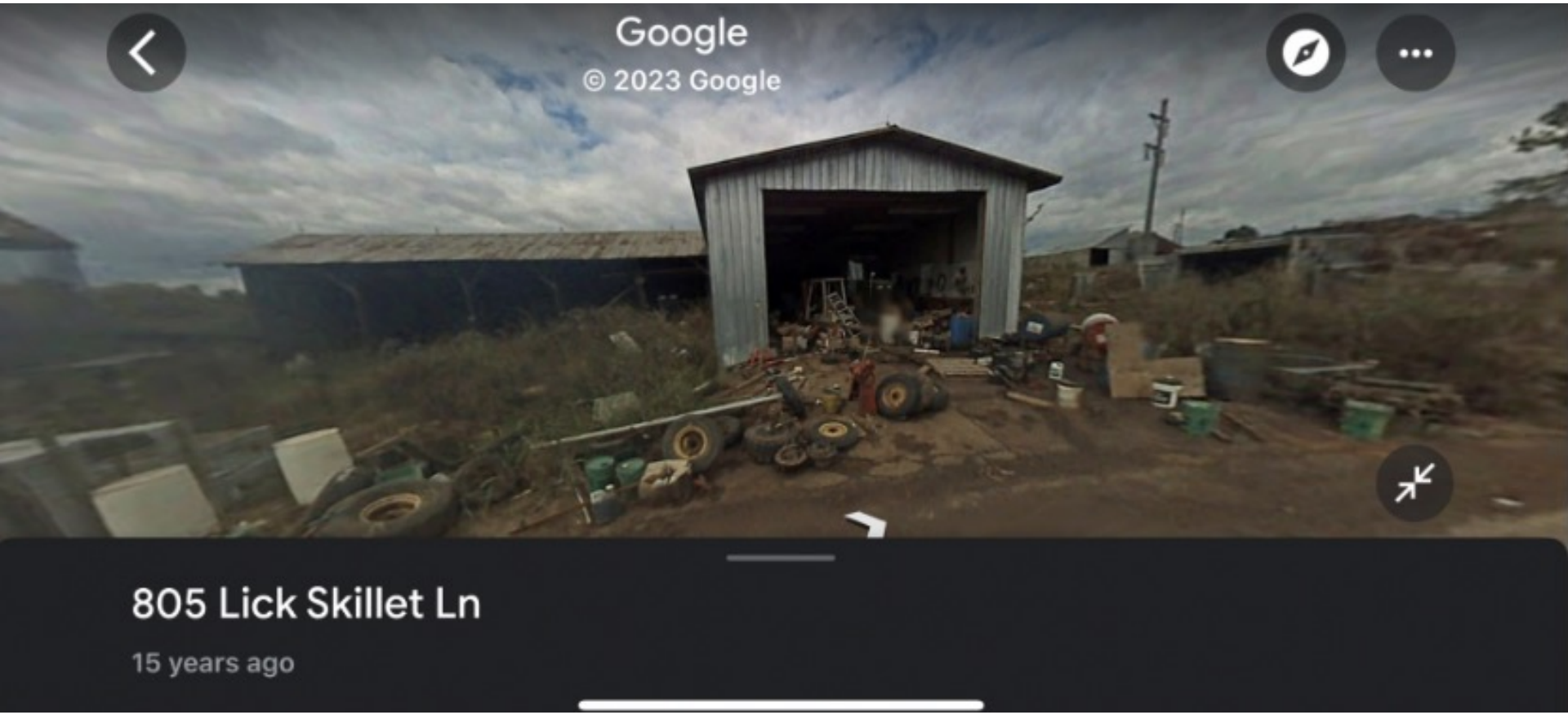

805 Lick Skillet Ln

15 years ago

What Is Happening to Local Farms?

Farming During Lick Skillet Farm's First 100 Years

1919	280,000 Tennessee Farms
2019	66,000 Tennessee Farms

214,000 Farms Lost in 100 Years = almost 6 per day

Tennessee averaged losing 1 farm about every 4 hours…
…for 100 years.

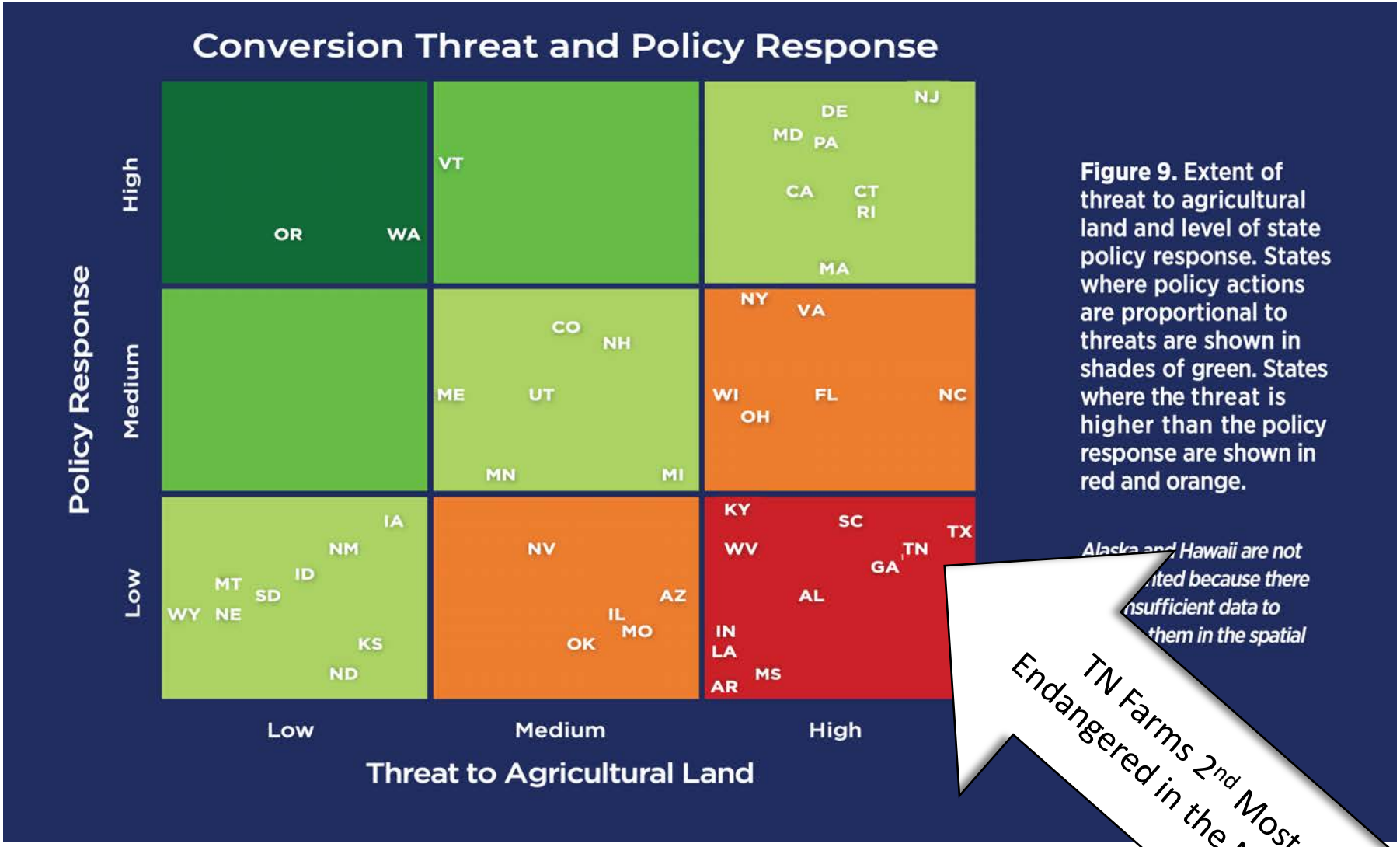

Figure 9. Extent of threat to agricultural land and level of state policy response. States where policy actions are proportional to threats are shown in shades of green. States where the threat is higher than the policy response are shown in red and orange.

Alaska and Hawaii are not ...ted because there ...nsufficient data to ...them in the spatial

TN Farms 2nd Most Endangered in the Nation

Why Local Farms Matter

TAKE THE 50% Pledge!

Spend at least 50% of your food dollars on direct purchases from local farmers and artisans; with the remainder of your food dollars, you can celebrate how small the world has become!

TAKE THE 50% Pledge!

LOCAL DIRECT PURCHASES:

- Raw Milk
- Raw Cheese
- Pork, Beef and Turkey
- Charcuterie and Organ Meats
- Chicken and Eggs
- Fruit and Vegetables
- Homemade Soups and Stews
- Homemade Desserts
- Sourdough Bread
- Lacto-Fermented Condiments
- Fermented Vegetables
- Kombucha

CELEBRATE OUR SMALL WORLD:

- Rice
- Pineapple
- Mango and Papaya
- Bananas
- Nuts
- Pepper
- Unrefined Salt
- Spices
- Heritage Grains
- Wild Seafood
- Fruit and Vegetables
- Breads and Crackers

westonaprice.org

Statistics on Tennessee Agriculture

- 342,000 employed
- $3.5 billion in direct revenue
- $1 billion in global exports
- $81 billion in total economic impact

Statistics o[illegible]e Agriculture

- 342,[illegible]0 empl[illegible]d
- $3.5 [illegible]llion in dir[illegible] reve[illegible]e
- $1 bill[illegible] in global ex[illegible]
- $81 billio[illegible]nomic impact

Why Local Farms Matter to You

1. Food safety
2. Food security
3. Food quality
4. Animal welfare
5. Environmental impact

1. Food Safety

Modern medicine is too often an attempt to fix with science that which could have been prevented by common sense.


PEDESTRIANS
PROHIBITED

Industrial Ag Answer to "How Often Should I Vaccinate?"

- **Heifers?** The biggest thing, as far as reproductive and respiratory problems, is vaccinating your replacement heifers about three times with modified live vaccines before breeding. Vaccinate these females at 2 to 3 months of age, around weaning, and six to eight weeks before breeding.
- **Mature cows and bulls?** I like vaccinating the mature herd twice a year, because most of the vaccinations give you a good protection for only six months. So, vaccinate in the spring before turning them out to pasture and then again in the fall during pregnancy checks.

https://www.farmprogress.com/animal-health/build-an-optimal-cattle-vaccination-routine

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To Sell Cattle Into the Industrial Agriculture Food Chain as "Premium" Products…

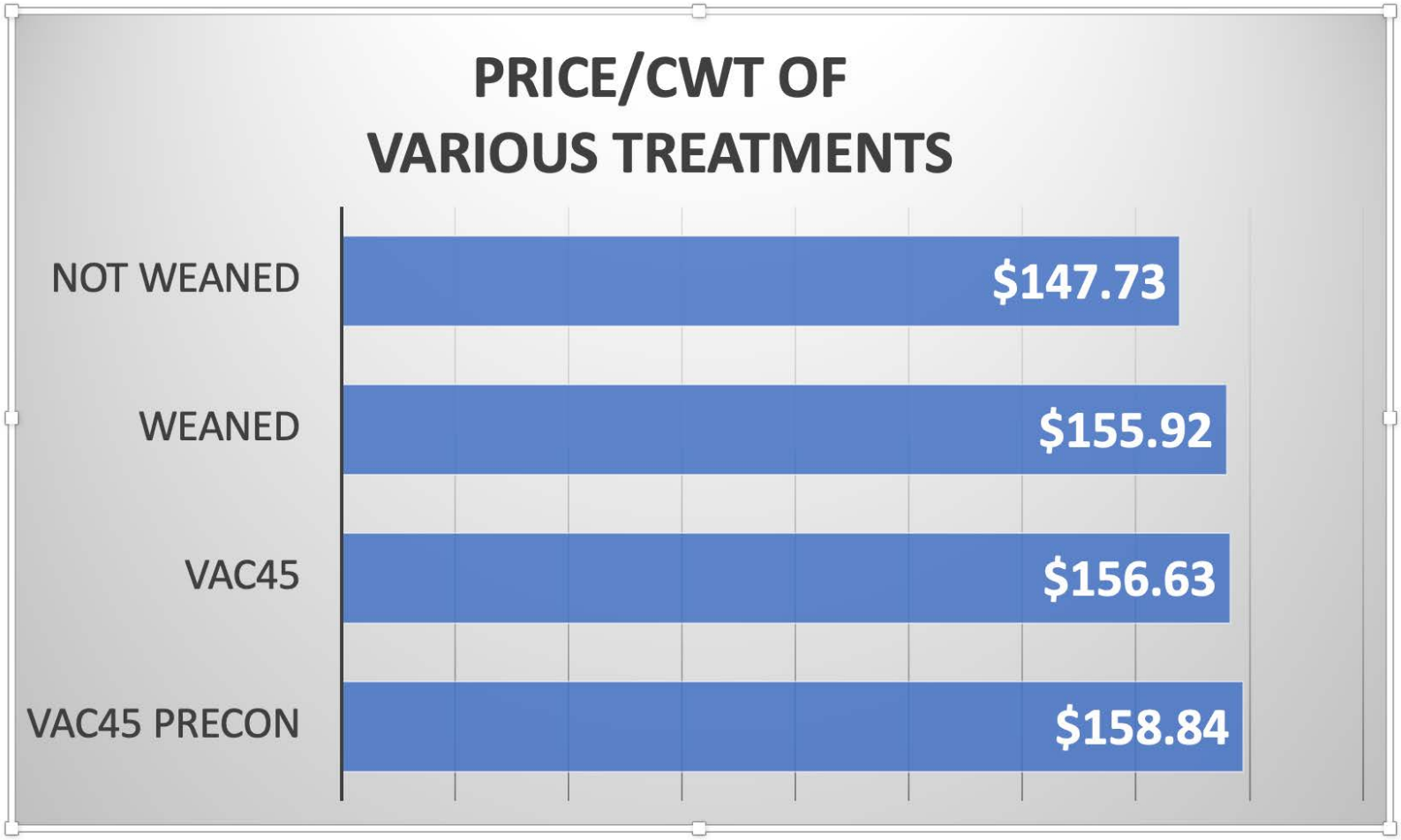
1. Must follow a prescribed vaccination protocol:
   A. Vaccinated with 2 doses of a 5-way respiratory vaccine
   B. Vaccinated with 2 doses of at least a 7-way clostridial vaccine
   C. Vaccinated with 1 dose of Pasteurella
2. Cattle must be tagged with a trackable chip
3. Recommended:
   A. Feed concentrate supplement for a minimum of seven days after weaning to train cattle to eat from a bunk
   B. Provide a coccidiostat through the feed, water or mineral
   C. Dewormed (recommended at weaning)
4. All of this verified by a third-party (typically a government employee)

BENEFITS: The OQBN Vac-45 program **benefits the cattle industry** by providing healthier and heavier cattle. The **benefits to producers** include potential premium received for preconditioned calves, reduced cattle stress and shrink, an improved cattle immune system, **increased sale weight of cattle**, increased market demands, neutral-branding ,and a third-party verification.

Minimum Set of Vaccinations to be Considered “Premium”

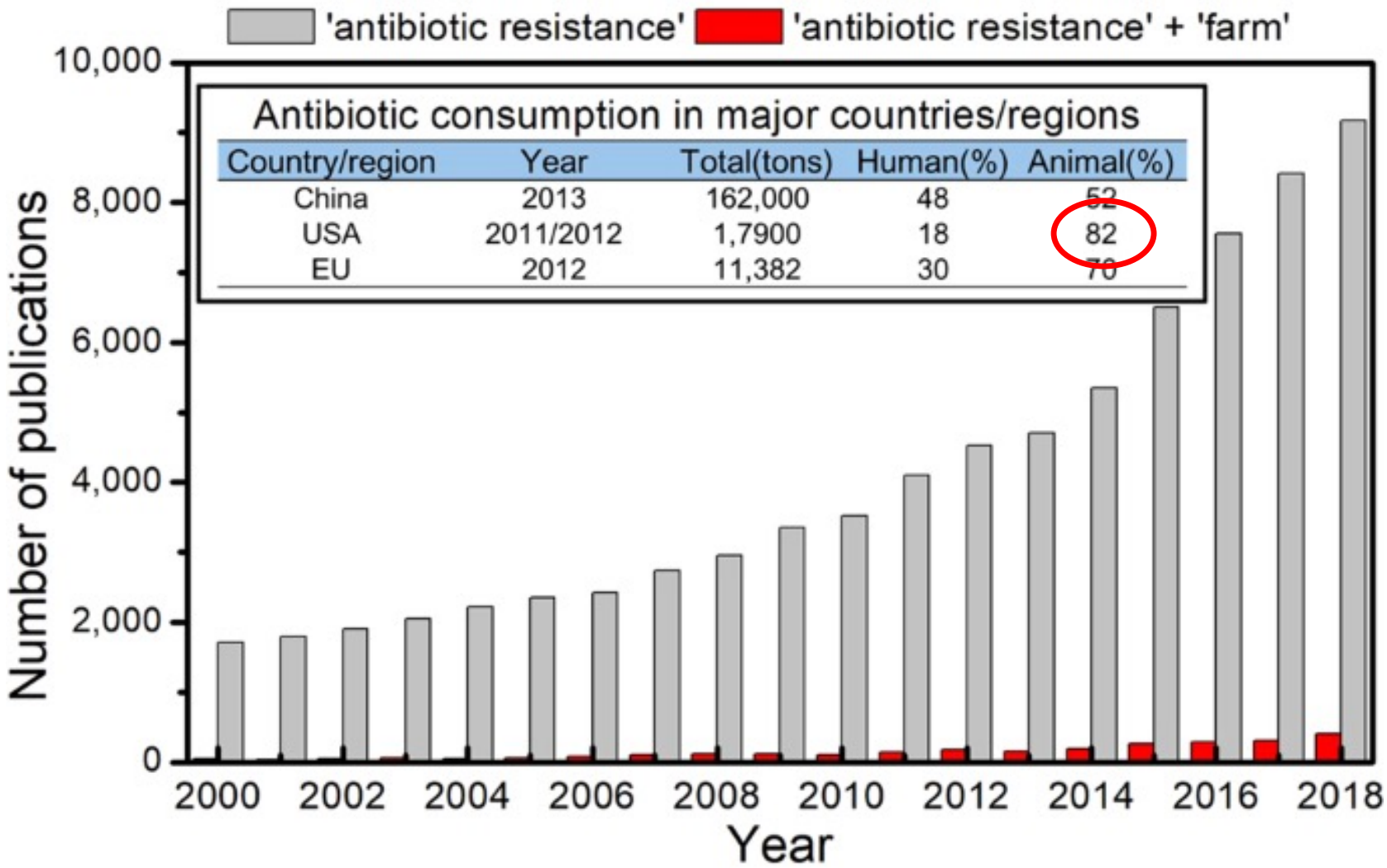
1. **Infectious bovine rhinotracheitis (IBR)**
2. **Bovine Virus Diarrhea 1 and 2 (BVD)**
3. **Parainfluenza-3 virus (PI-3)**
4. **Bovine respiratory syncytial virus (BRSV)**
5. **Tetanus**
6. **Botulism**
7. **Blackleg**
8. **Bacillary Hemoglobinuria**
9. **Necrotic Hepatitis**
10. **Overeating Disease**
11. **Enterotoxaemia**
12. **Malignant Edema**
13. **Acute Cervical Hemorrhagic Edema**

“Premium” Cattle Producers are Paid for Vaccinating



https://www.drovers.com/news/industry/value-added-premiums-50-head-data-show

Let's Talk About Antibiotics



Antibiotic consumption in major countries/regions

Country/region	Year	Total(tons)	Human(%)	Animal(%)
China	2013	162,000	48	52
USA	2011/2012	1,7900	18	82
EU	2012	11,382	30	70

https://www.springernature.com/gp/open-research/about/the-fundamentals-of-open-access-and-open-research

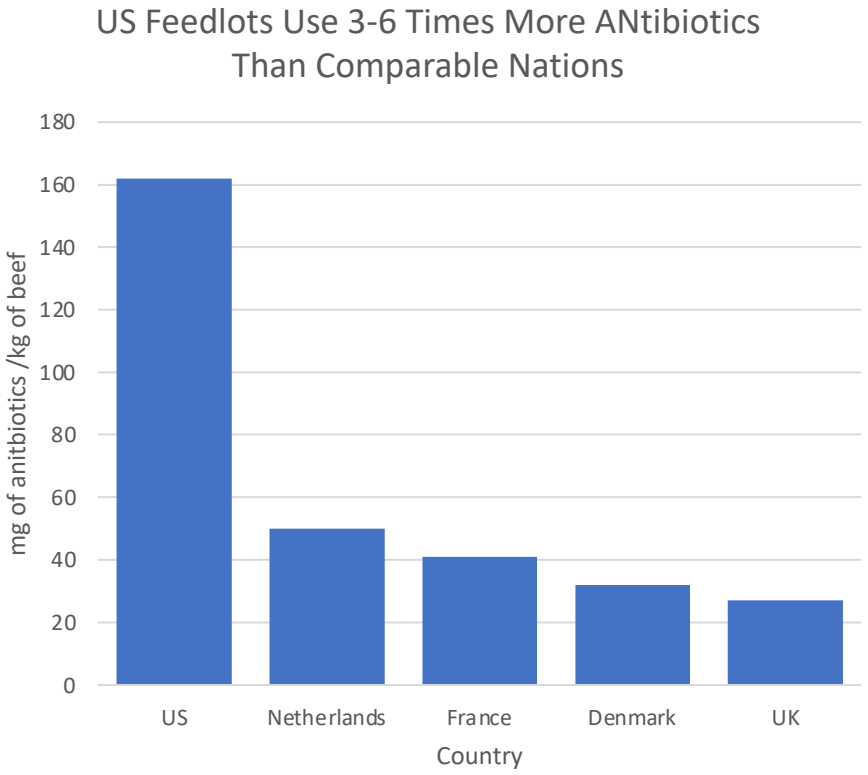
When the Cattle Arrive at the Feedlot…

1. **Immediately give a broad spectrum, long-lasting antibiotic**
2. **Put on feed that contains antibiotics in every bite.**

Feedlot Cattle Receive Antibiotics with Every Bite of Feed

- Cattle finished on grass alone typically have a rumen pH just under 7 or neutral.
- Feedlot cattle have lower pH. When the pH is less than 5.2, is called acute acidosis.
- The higher level of acids irritate the bowels, escape the digestive tract, enter the bloodstream, are captured by the liver where they cause abscesses and lower average daily gain by around 5%.
- Antibiotics are added to the feed to control liver abscesses in feedlot cattle.

In A World Afloat in Antibiotics, USA is a "Global Leader"



https://www.cidrap.umn.edu/antimicrobial-stewardship/report-slams-beef-industry-overuse-antibiotics#:~:text=Antibiotic%20use%20on%20feedlots&text=The%20top%20two%20antibiotics%20used,their%20feed%20and%20drinking%20water.

If you buy beef produced by Industrial Agriculture, chances are extremely high that it comes from animals treated with antibiotics.

Percent Feedlots

	Feedlot Capacity (number head)					
	Small (50–999)		**Large** (1,000 or more)		**All feedlots**	
Route of administration	**Pct.**	**Std. error**	**Pct.**	**Std. error**	**Pct.**	**Std. error**
Feed—any medically important antimicrobial	53.8	(6.0)	77.8	(3.6)	55.6	(5.5)
Feed—only nonmedically important antimicrobials[1]	15.6	(4.6)	9.3	(2.5)	15.2	(4.2)
Feed—any antimicrobial	69.5	(4.8)	87.1	(2.8)	70.8	(4.5)
Water[2]	9.1	(3.2)	1.1	(0.7)	8.5	(2.9)
Injection (group)[2]	12.8	(3.8)	39.3	(3.4)	14.8	(3.5)
Injection (individual)[2]	78.5	(4.9)	97.9	(1.0)	80.0	(4.6)
Any antimicrobials	86.6	(4.0)	99.5	(0.5)	87.5	(3.7)

[1]Ionophores were the only antimicrobials used by feedlots in this report that are not considered medically important by the FDA.

[2]All antimicrobials used in water or by injection in this report are considered medically important by the FDA.

https://www.aphis.usda.gov/animal_health/nahms/downloads/amu-feedlots.pdf

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Money vs Safety in Industrial Ag

"The reasons for the tremendous adoption of this particular technology is the consistent return on investment. The net return on investment when ionophores are fed to cattle equates to approximately **$20** per head (Elanco Animal Health, 2015)."

https://extension.psu.edu/ionophores-a-technology-to-improve-cattle-efficiency

"Not enough money is being spent on safety, so be careful."

If this Isn't helping consumers or producers, is it at least saving animals? NO!

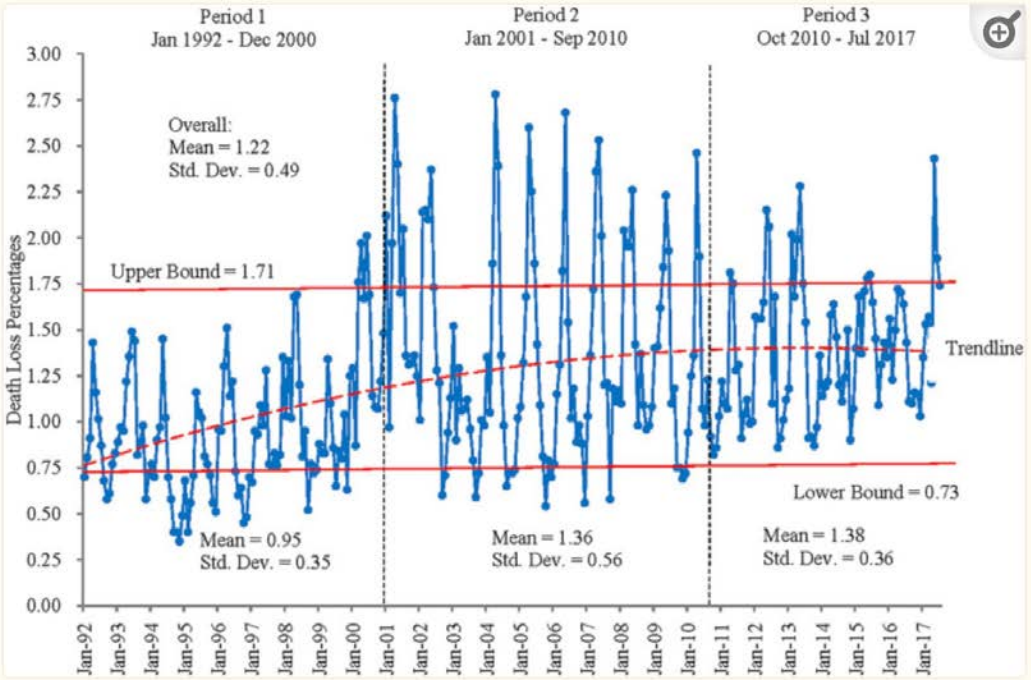


Figure 3

Death loss percentages for steers, Kansas, January 1992–July 2017.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9923111/#:~:text=Industry%20reports%20and%20anecdotal%20evidence,feedlot%20cost%20and%20thus%20profitability.

What About MRNAs?

- Should We Worry About MRNA In Livestock?
- WAPF NEWSLETTER, JULY 27, 2023 BY TOM COWAN
- “Regardless of health concerns, consumers have the right to know if the meat they’re purchasing comes from an animal that had received a mRNA-based vaccine just as they have the right to know if a cow was grass fed or a chicken raised cage-free.”
- “We all should try to obtain our meat and dairy products from small farmers who use no vaccines or chemicals of any sort. That is the only safe and reasonable way to obtain meat.”

Report: mRNA vaccines are being injected into livestock

by World Tribune Staff, January 13, 2023

The mRNA vaccines are being injected into livestock and companion animals, Dr. Robert Malone contends.

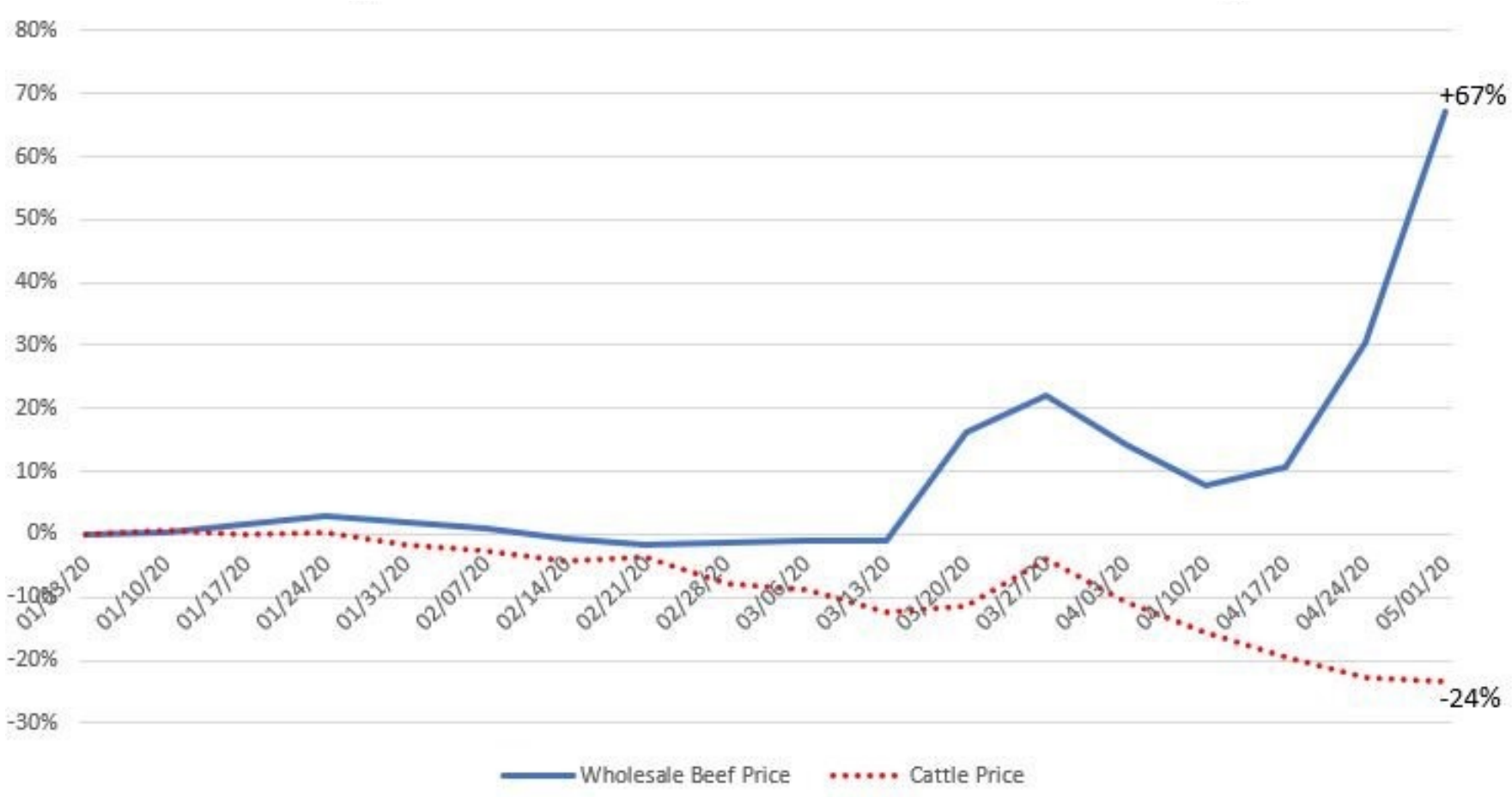
That means, if you consume the vaccinated animal, the mRNA vaccine enters your body.

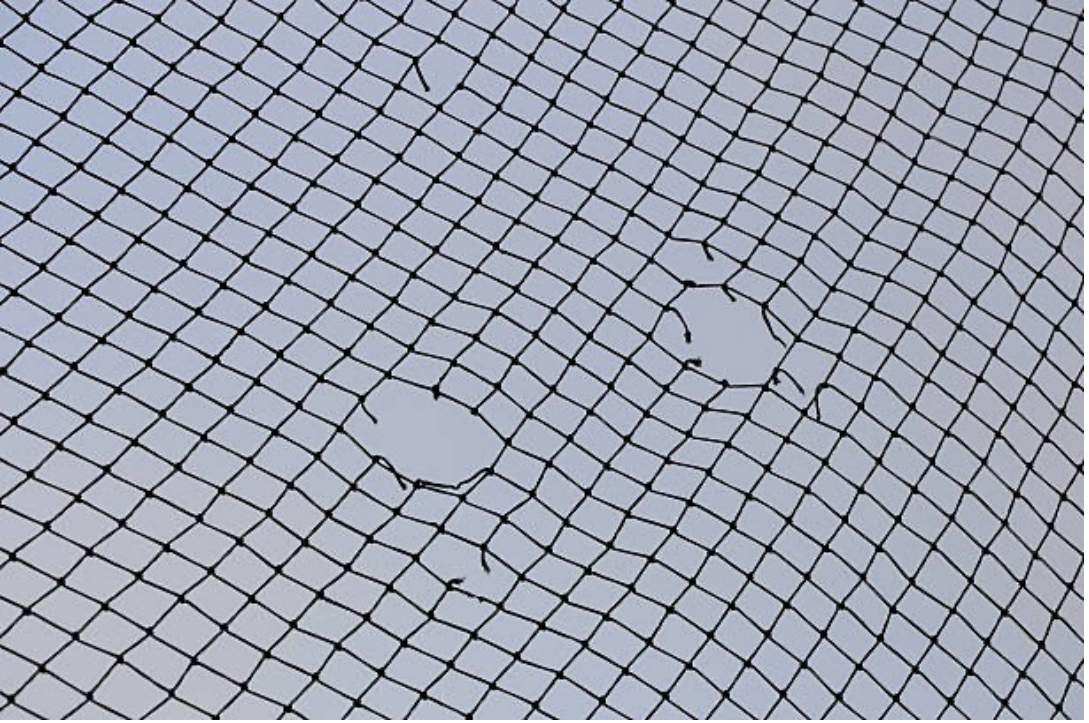
Bayer and BioNTech “have been working on livestock and companion animal mRNA vaccines for over six years,” Malone noted in a Jan. 11 substack.com analysis. “Logic predicts that they will soon have livestock and companion mRNA vaccine and RNA therapeutics on the market.”

https://factcheck.afp.com/doc.afp.com.337U7PW

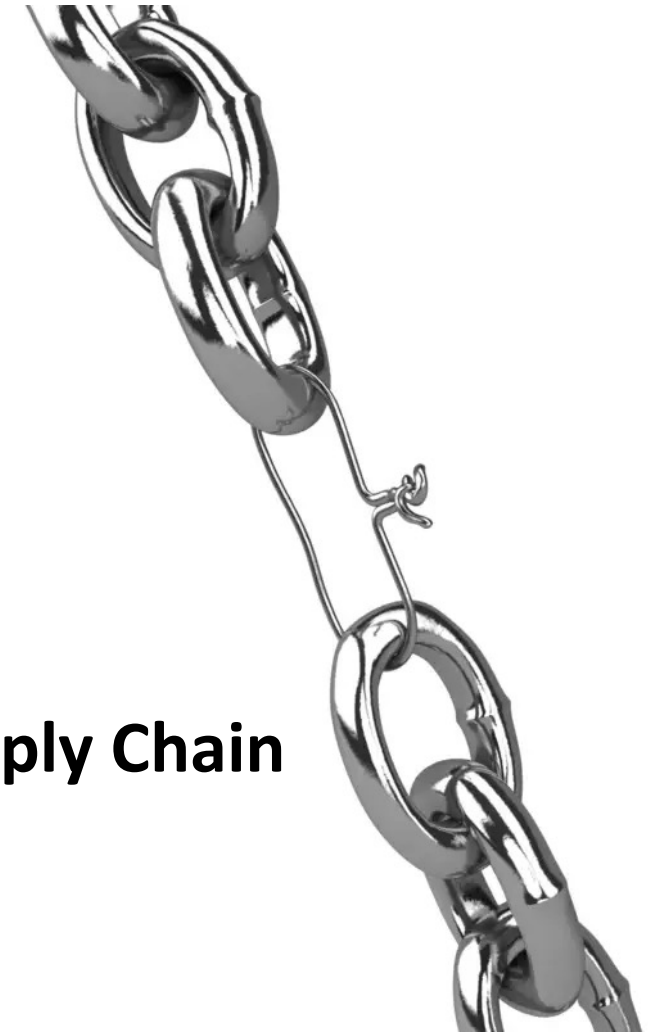
2. Food Security

Your Beef Prices vs Producer's Cattle Pirces in First Weeks of COVID

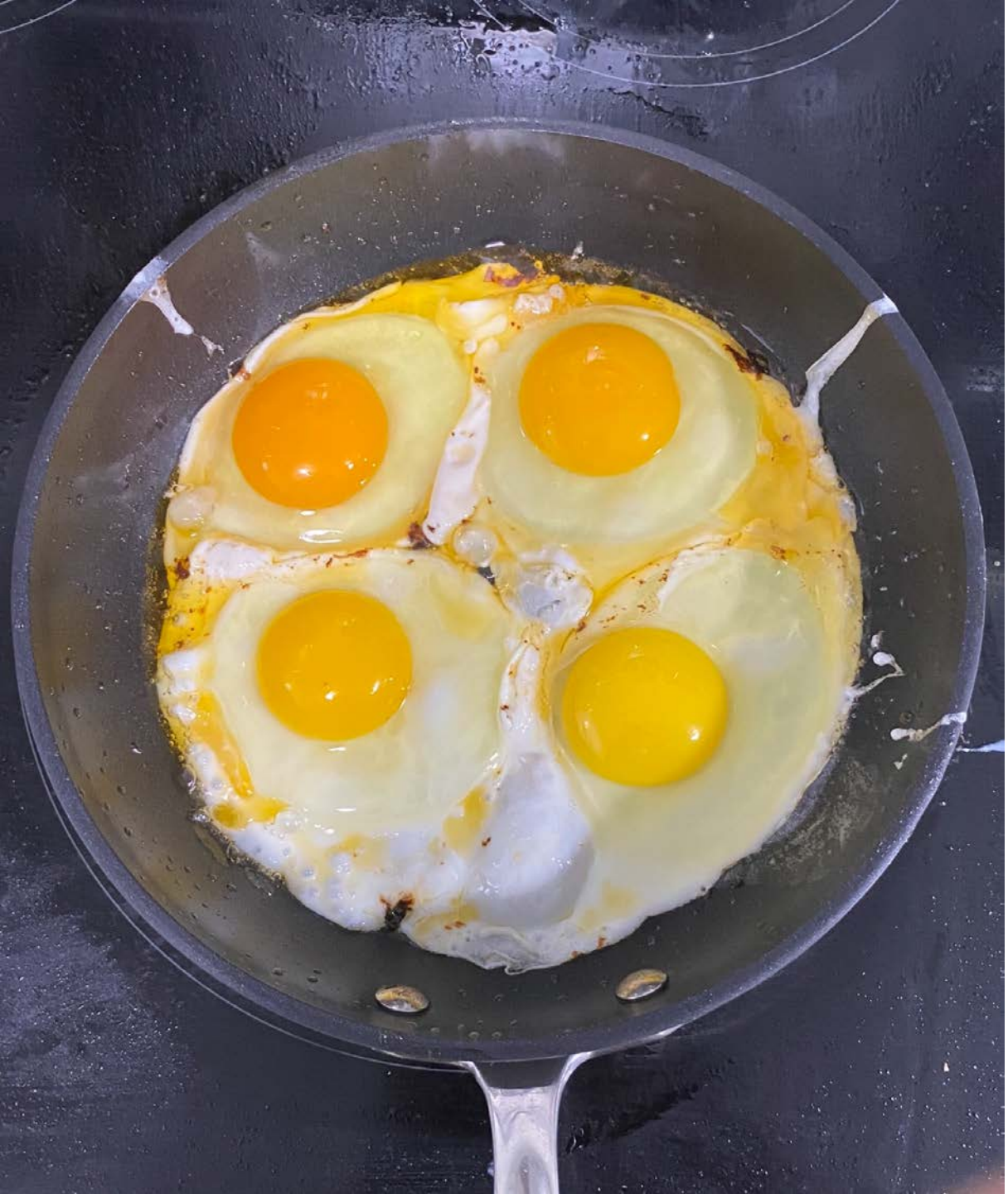




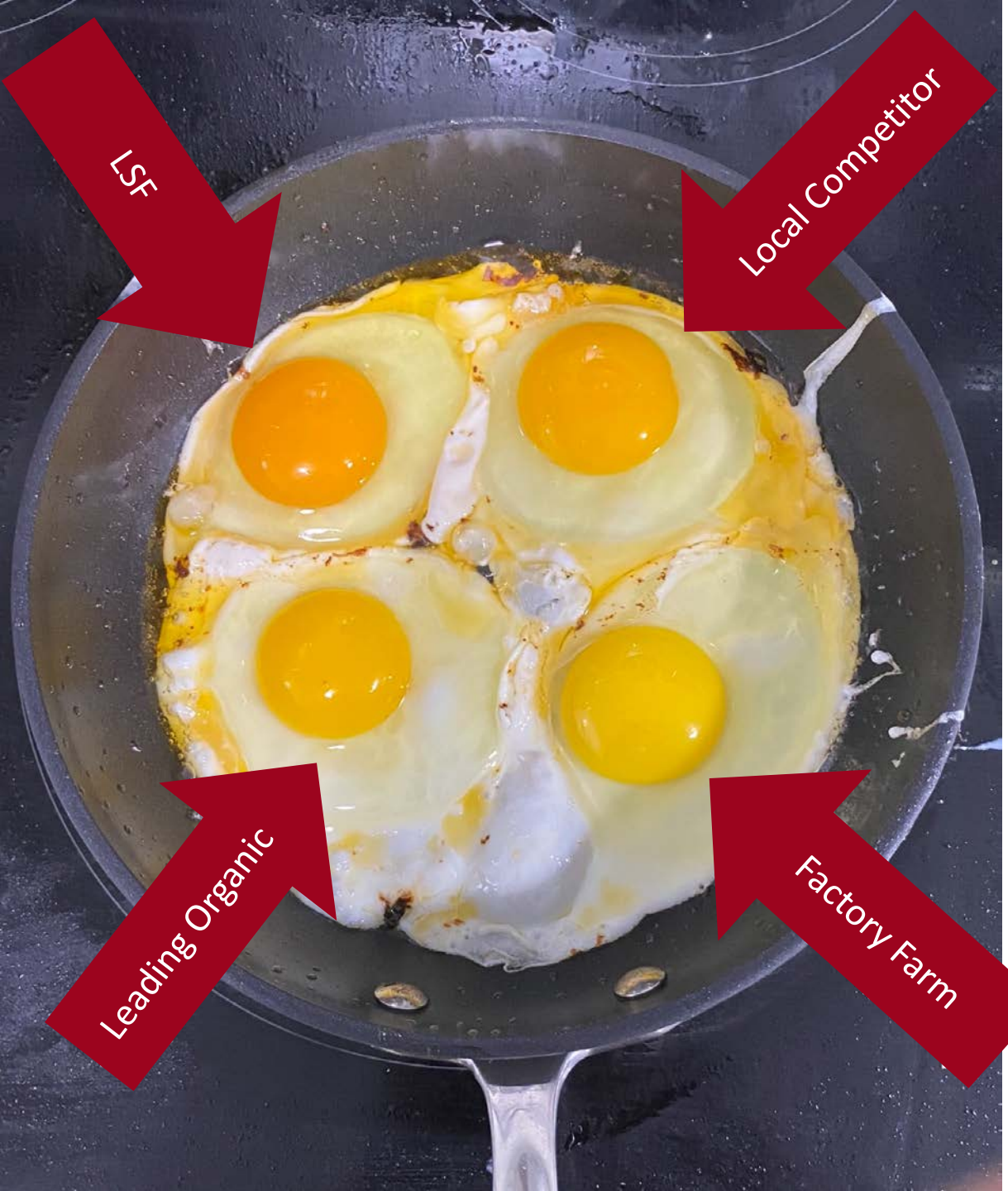
Local Food Network



Global Food Supply Chain



3. Foor Quality



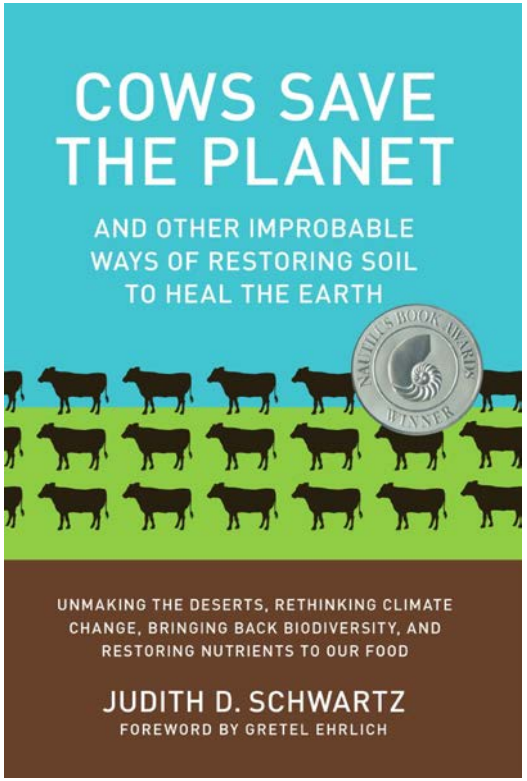
2. Quality

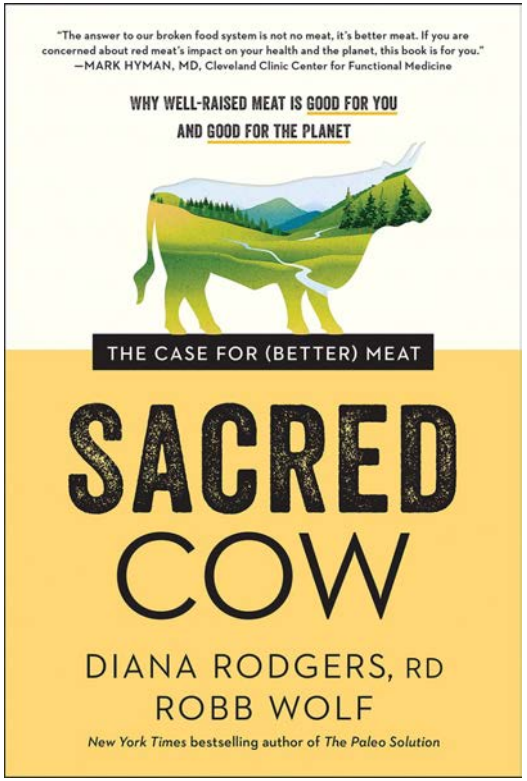
4. Animal Welfare

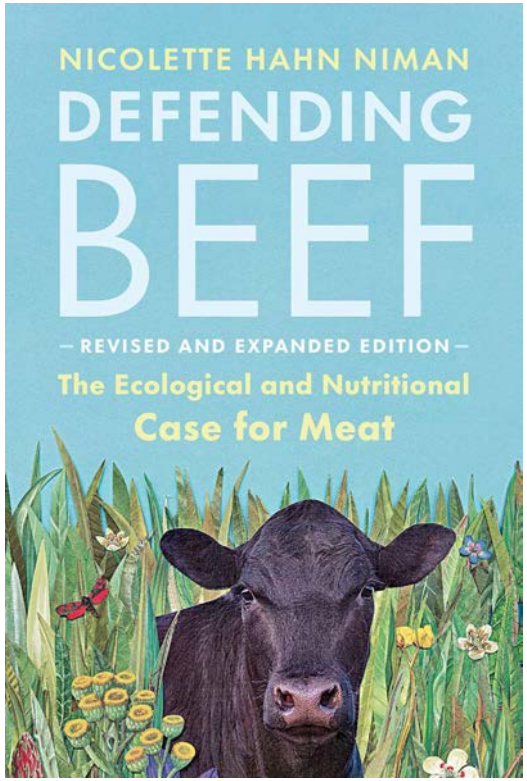

PEDESTRIANS
PROHIBITED

5. Environmental Impact

Beef, Raised Right, is More of a Solution than a Problem



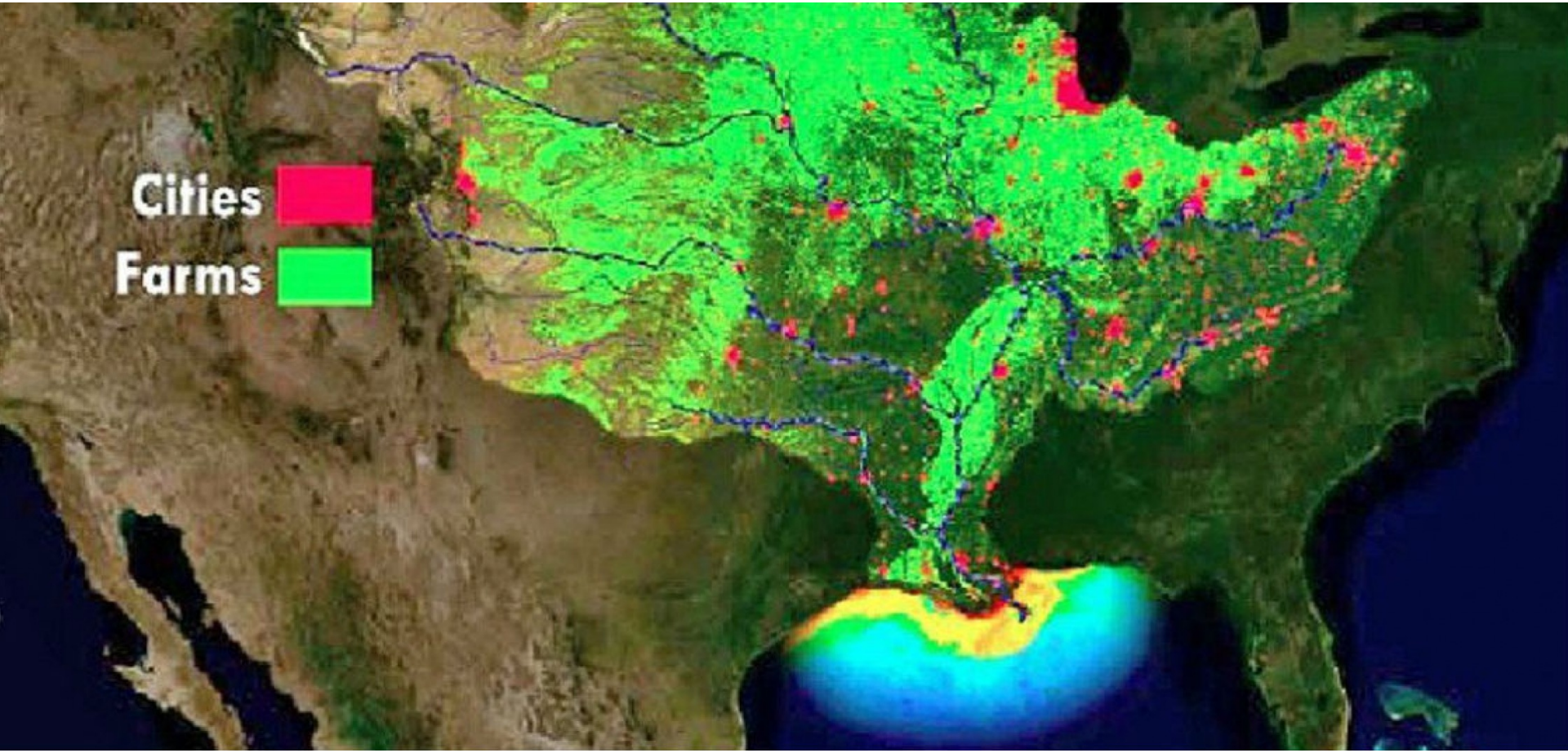




But don’t we need industrial agriculture to feed the world???

How Much Food do Industrial Farms Produce?

Only 10% of Corn and 6% of Soy are eaten as food by humans.



Industrial Farming has been a major contributor to the Dead Zone in the Gulf – now the size of Massachusetts.

One Billion Don’t Have Enough to Eat Under the Current System

70% of the World's Population Gets its Food From Small Local Farms

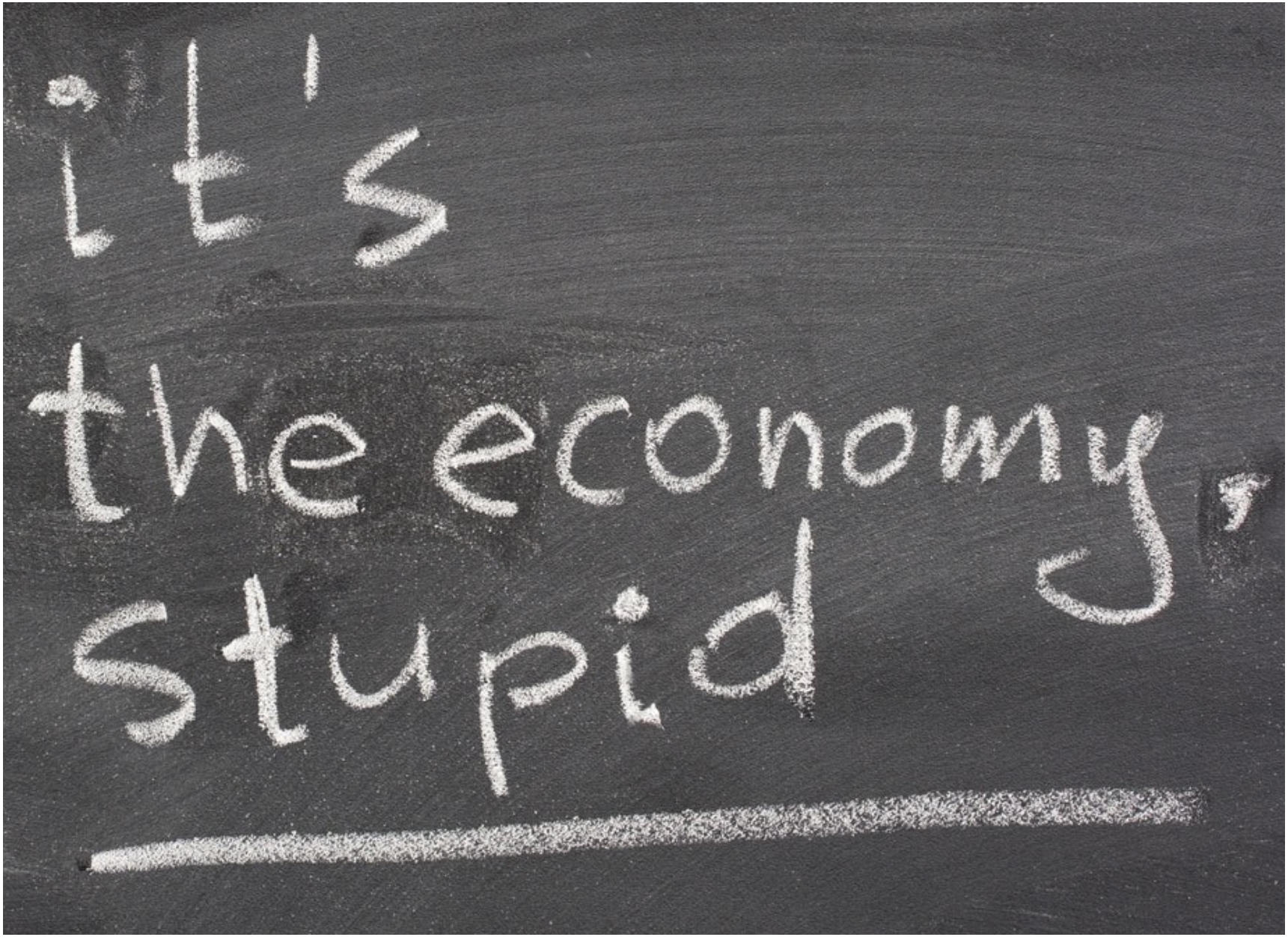
Examples of regenerative practices

SoilsForLife


GOVERNOR'S
ENVIRONMENTAL STEWARDSHIP AWARDS

UN: only small Farmers and Agroecology can feed the World

Why Are We Losing Our Local Farms?


it's
the economy,
stupid

Economics at Lick Skillet Farm

Year	Land Price (1919 $)	Cattle Price (1919 $)
1919	$50	8.7¢
2019		

Economics at Lick Skillet Farm

Year	Land Price (2019 $)	Cattle Price (2019 $)
1919	$852	$1.48
2019		

Economics at Lick Skillet Farm

Year	Land Price (2019 $)	Cattle Price (2019 $)
1919	$852	$1.48
2019	$12,500	$1.50

Economics at Lick Skillet Farm

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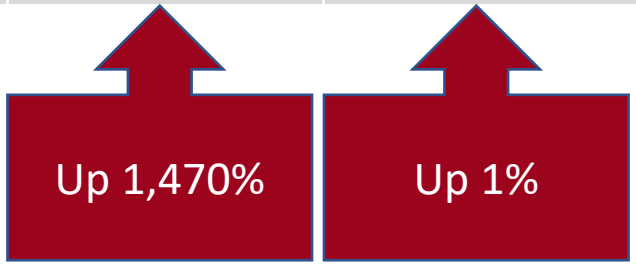
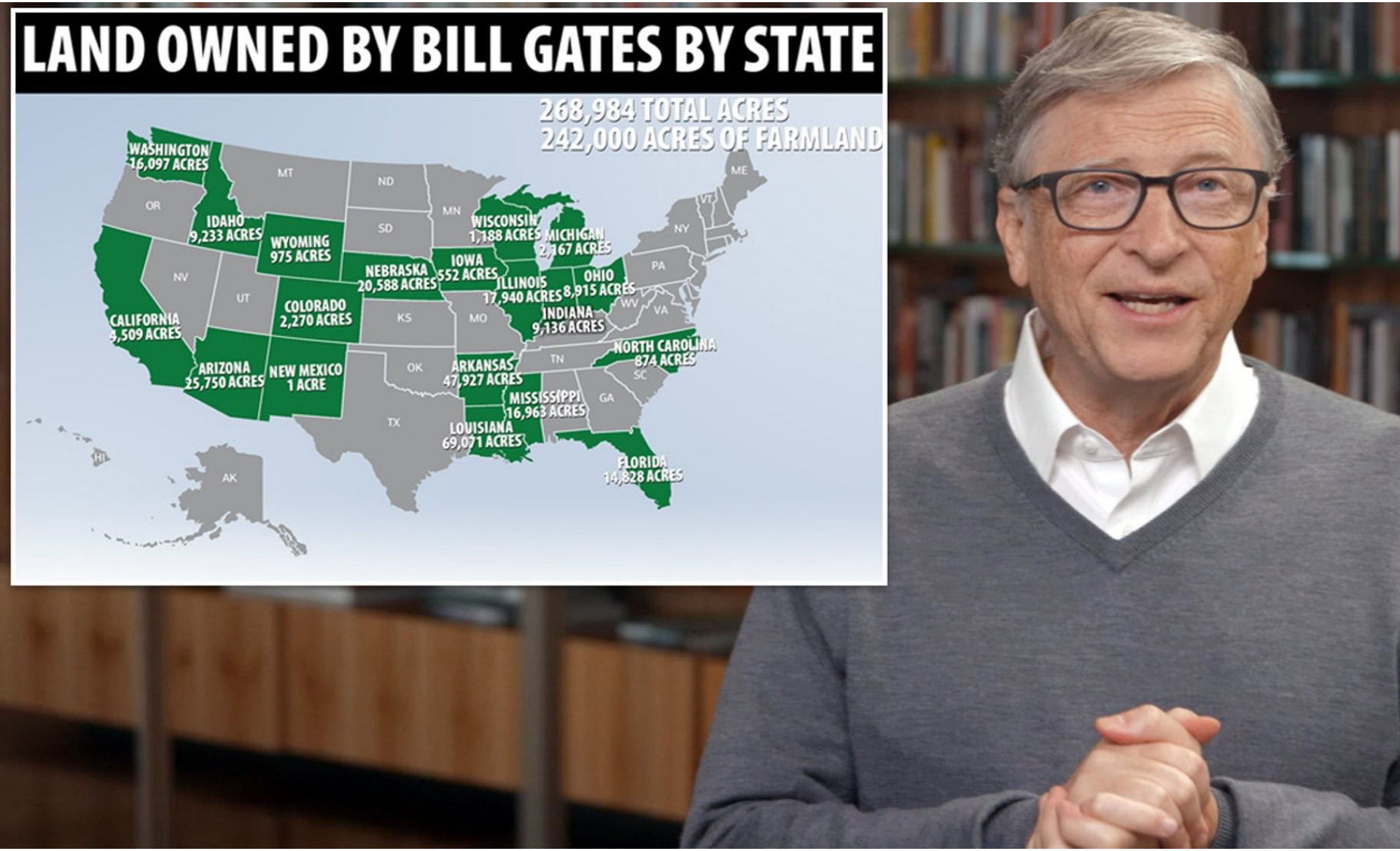
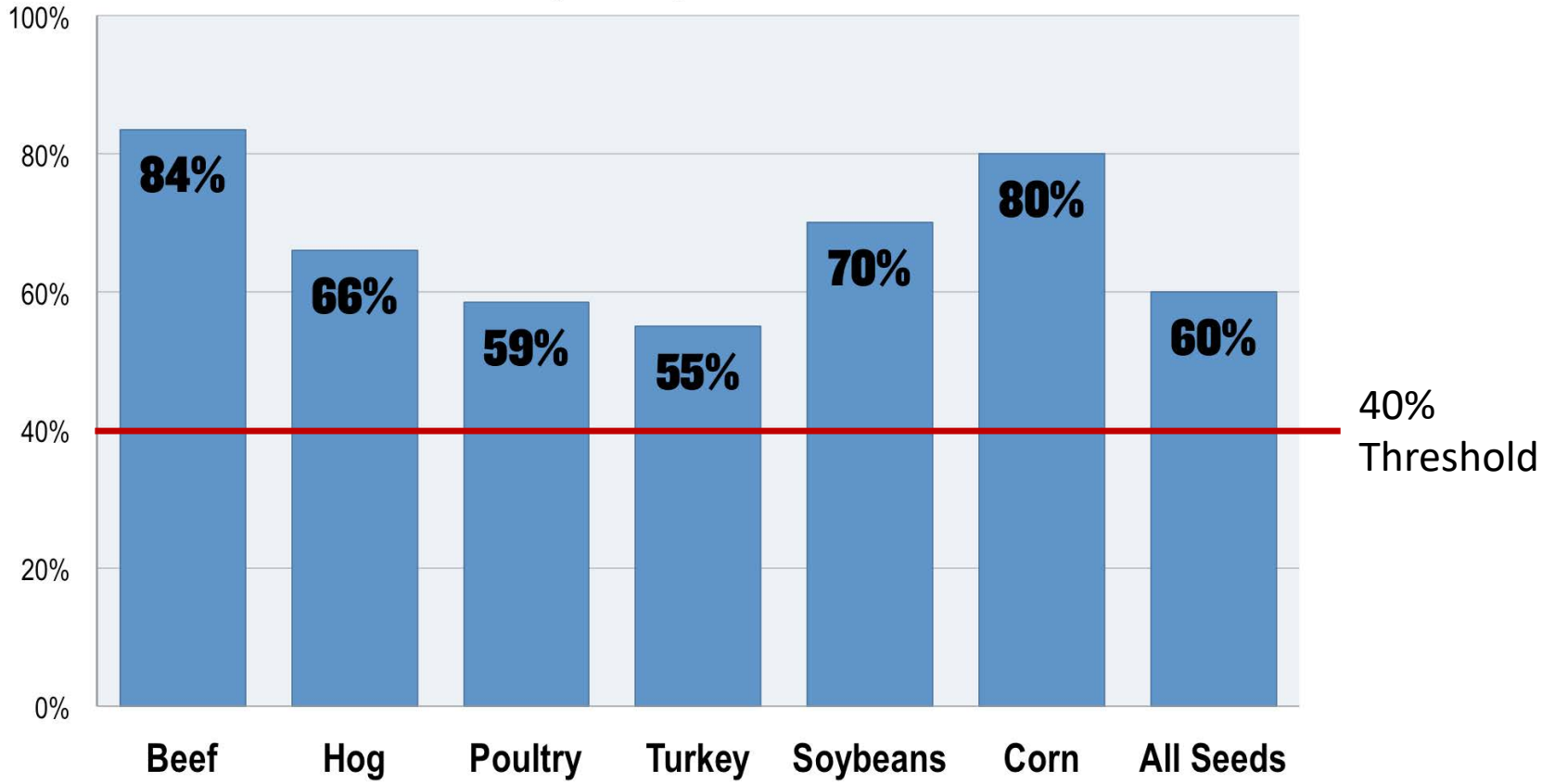



LAND OWNED BY BILL GATES BY STATE
268,984 TOTAL ACRES
242,000 ACRES OF FARMLAND
WASHINGTON 16,097 ACRES
IDAHO 9,233 ACRES
WYOMING 975 ACRES
NEBRASKA 20,588 ACRES
IOWA 552 ACRES
WISCONSIN 1,188 ACRES
MICHIGAN 2,167 ACRES
ILLINOIS 17,940 ACRES
OHIO 8,915 ACRES
INDIANA 9,136 ACRES
COLORADO 2,270 ACRES
CALIFORNIA 4,509 ACRES
ARIZONA 25,750 ACRES
NEW MEXICO 1 ACRE
ARKANSAS 47,927 ACRES
MISSISSIPPI 16,963 ACRES
LOUISIANA 69,071 ACRES
NORTH CAROLINA 874 ACRES
FLORIDA 14,828 ACRES
MT
ND
MN
OR
SD
NV
UT
KS
MO
OK
TX
TN
SC
GA
NY
PA
WV
VA
ME
VT
HI
AK

Concentration in Agriculture

Top 4 Companies' Share



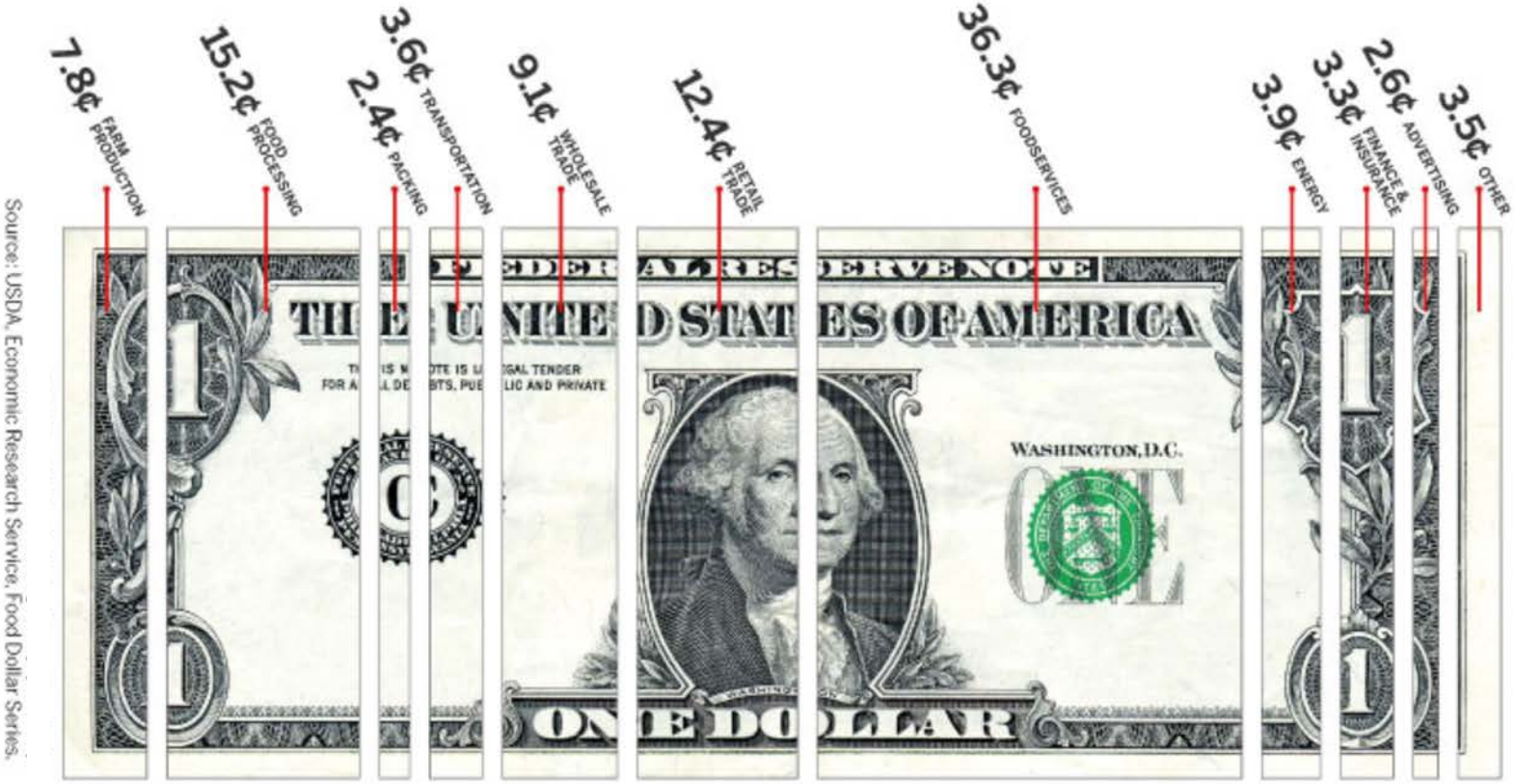
The Big 4 Packers in US Beef Industry


“Product of the USA”?
Where is your “grassfed” meal coming from?
9,469 mi
Loophole allows livestock shipped from foreign countries to be labeled “American Grassfed”
#realgrassfed
#knowyourfarmer
United States
Mexico
Gulf of Mexico
Cuba
Puerto Rico
Guatemala
Caribbean Sea
Nicaragua
Venezuela
Colombia
Philippine Sea
Vietnam
Philippines
Indonesia
Banda Sea
Arafura Sea
Papua New Guinea
Coral Sea
Australia
Great Australian Bight
South Pacific Ocean
Peru
Bolivia
Chile
Argentina
China

TELL YOUR SENATOR:

Support Mandatory Country of Origin Labeling!

How much does the farmer get of your food dollar?



Source: USDA, Economic Research Service, Food Dollar Series.

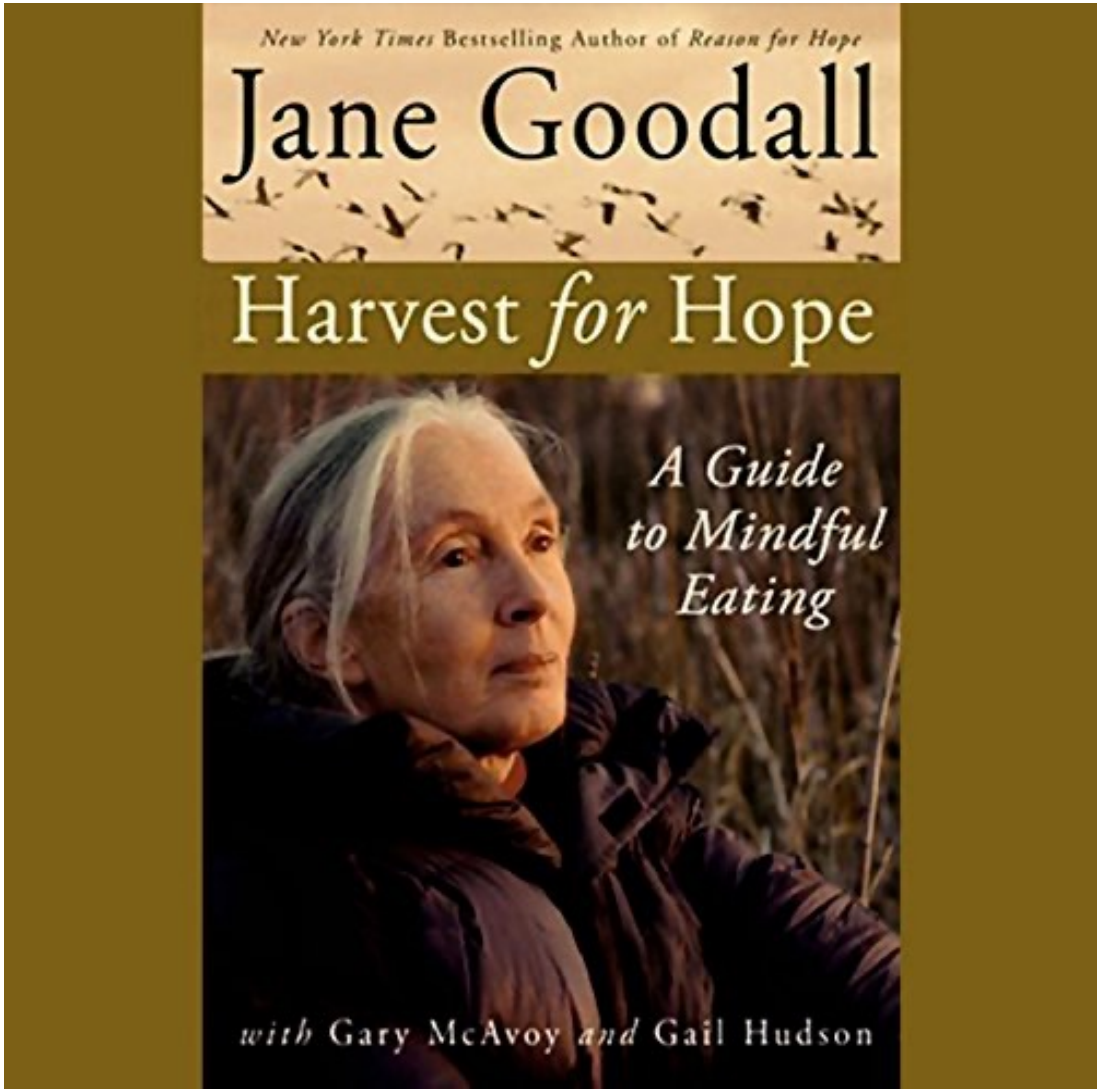
7.8¢ for Farm Production

What Can You Do About It?

3 Key Steps to Saving Local Farms

1. Take the pledge
2. Find local farms
3. Carefully select “your” farmer

Take the Pledge


New York Times Bestselling Author of Reason for Hope
Jane Goodall
Harvest for Hope
A Guide to Mindful Eating
with Gary McAvoy and Gail Hudson

How to Find Local Farms

1. WAPF
   A. Ask your WAPF Local Chapter
   B. Annual Shoppers Guide
   C. Advertisers
2. Good Meat Project (www.goodmeatproject.org)
3. Contact Your State Department of Agriculture


pick
TENNESSEE
PRODUCTS

8 Questions You Should Ask Farmers

Health, Safety, & Quality of Food

1. What use do you make of GMOs, antibiotics, vaccines, hormones, insecticides, herbicides, synthetic fertilizers?
2. Do you ever feed ***any*** grain to ruminants (cattle and sheep)?
3. What grains do you feed your monogastrics (pigs and poultry)?
4. At what age, weight, and level of finish are your cattle harvested?
5. How do you manage quality assurance of X (whatever product you buy)? What is your guarantee?

Animals, People & Environment

6. What policies and procedures do you use to ensure animal welfare?
7. What makes your farm a good place for your employees to work?
8. What are you doing to restore your environment to what it was before it was farmed?

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